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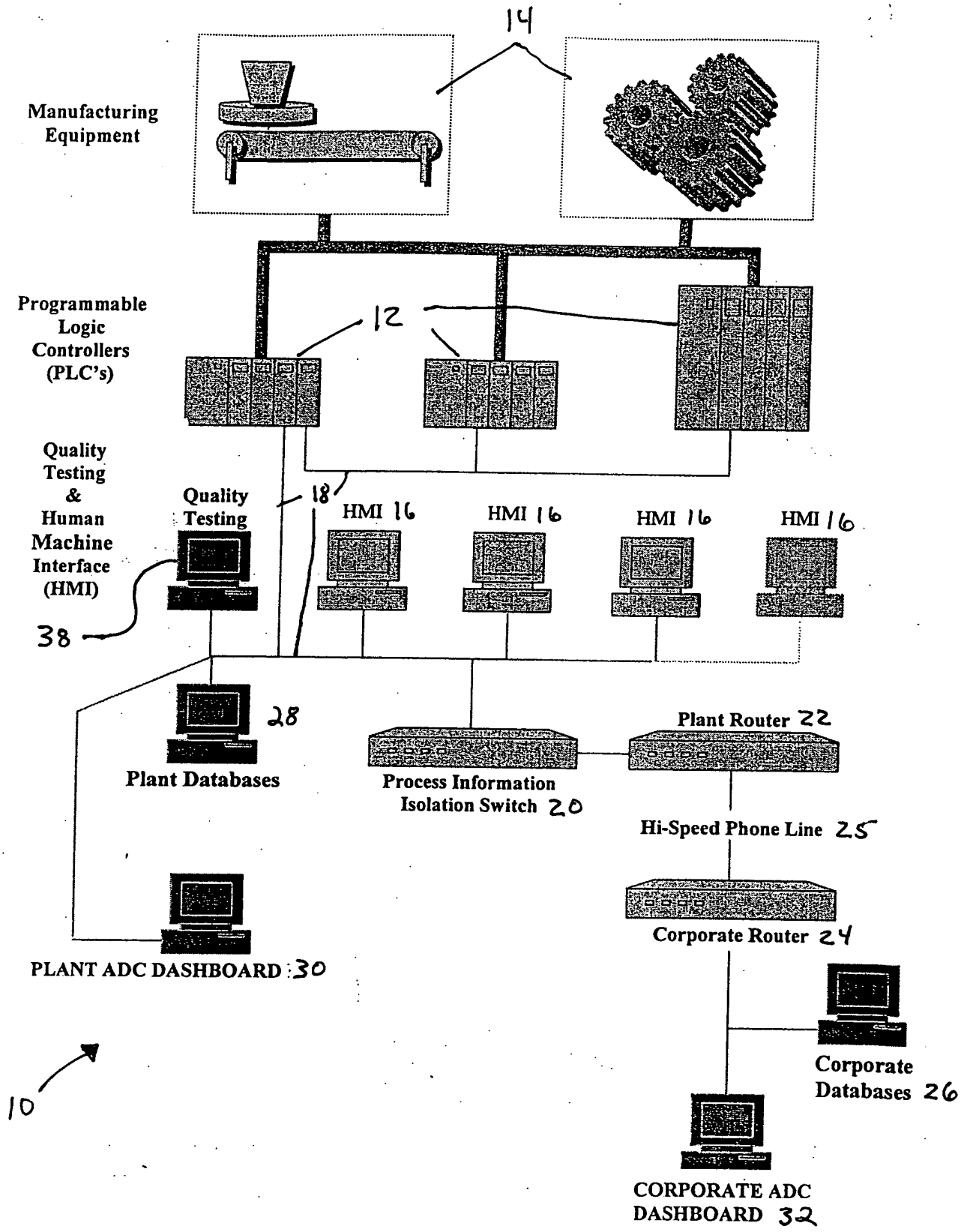

14
Manufacturing Equipment
Programmable Logic Controllers (PLC's)
12
Quality Testing & Human Machine Interface (HMI)
Quality Testing
18
HMI 16
HMI 16
HMI 16
HMI 16
38
28
Plant Databases
Process Information Isolation Switch 20
Plant Router 22
Hi-Speed Phone Line 25
Corporate Router 24
PLANT ADC DASHBOARD 30
Corporate Databases 26
CORPORATE ADC DASHBOARD 32
10

Fig. 1

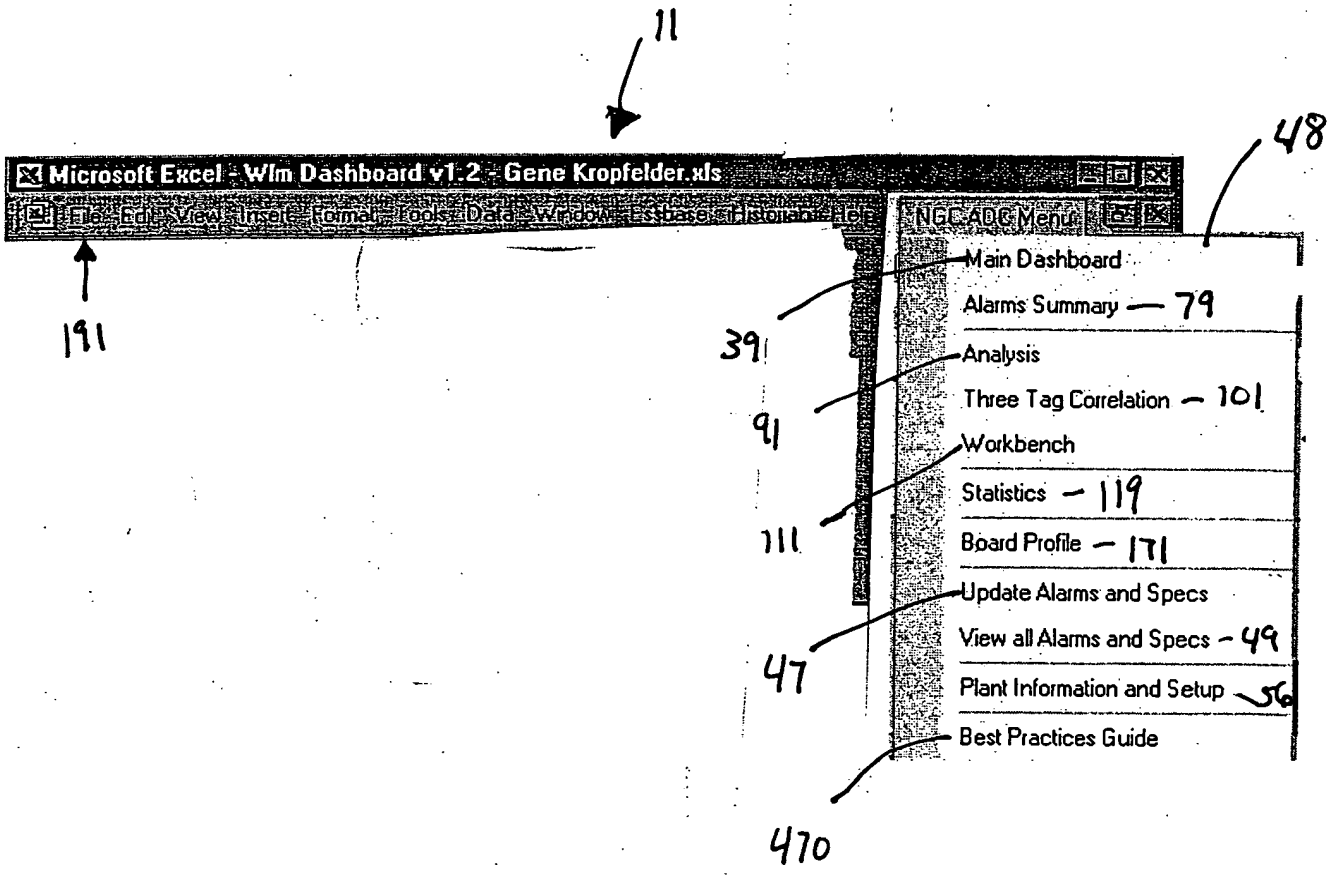

11
48
Microsoft Excel - Wlm Dashboard v1.2 - Gene Kropfelder.xls
File Edit View Insert Format Tools Data Window Essbase Historian Help
NGC ADG Menu
Main Dashboard
Alarms Summary — 79
Analysis
Three Tag Correlation — 101
Workbench
Statistics — 119
Board Profile — 171
Update Alarms and Specs
View all Alarms and Specs — 49
Plant Information and Setup
Best Practices Guide
191
39
91
111
47
470

Figure 2a

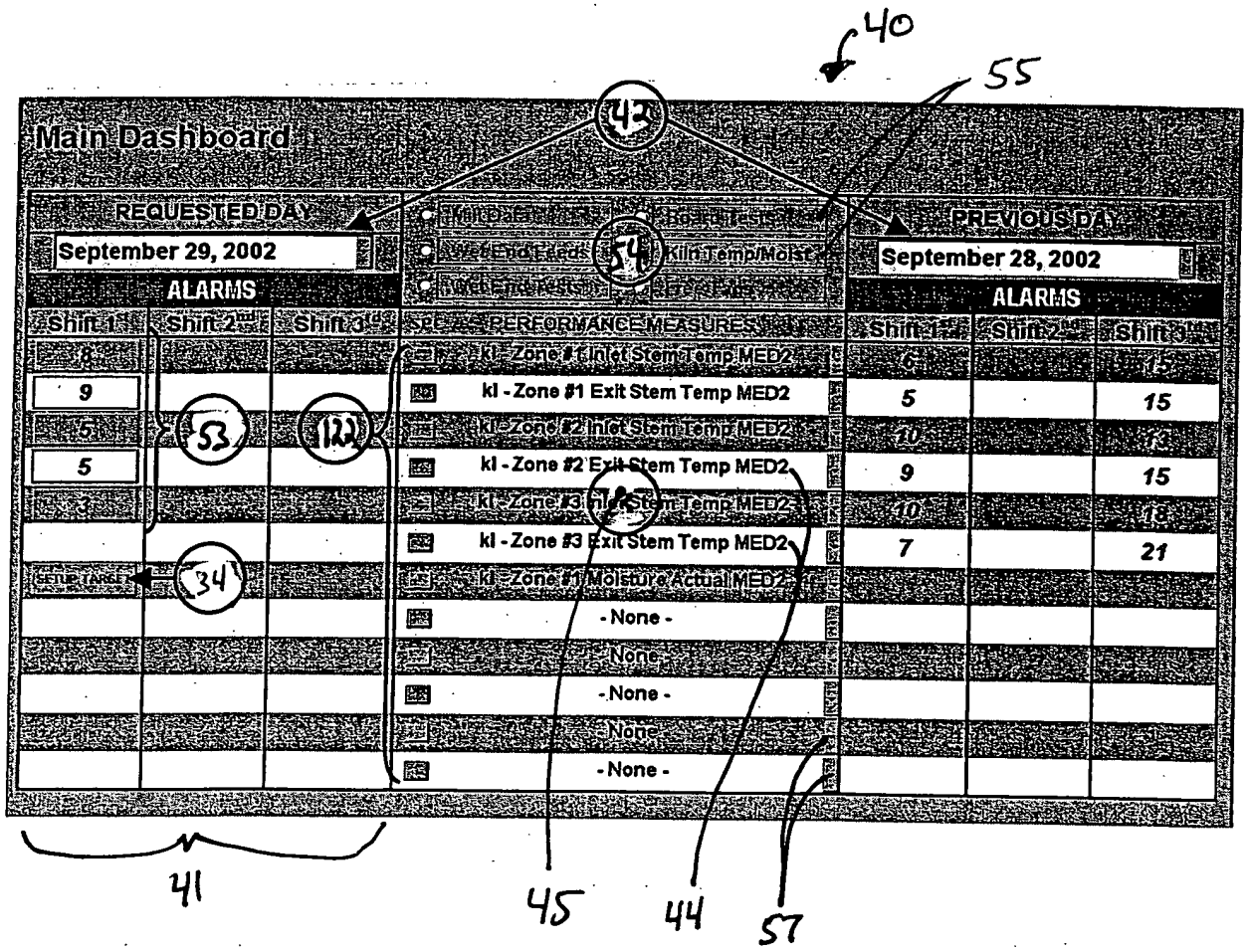

40
55
42
Main Dashboard
REQUESTED DAY
September 29, 2002
ALARMS
Shift 1
Shift 2
Shift 3
8
9
5
5
3
SETUP TARGET
53
122
34
54
PERFORMANCE MEASURES
kl - Zone #1 Inlet Stem Temp MED2
kl - Zone #1 Exit Stem Temp MED2
kl - Zone #2 Inlet Stem Temp MED2
kl - Zone #2 Exit Stem Temp MED2
kl - Zone #3 Inlet Stem Temp MED2
kl - Zone #3 Exit Stem Temp MED2
kl - Zone #1 Moisture Actual MED2
- None -
- None -
- None -
- None -
PREVIOUS DAY
September 28, 2002
ALARMS
Shift 1
Shift 2
Shift 3
6
15
5
15
10
13
9
15
10
13
7
21
41
45
44
57

Fig. 2b

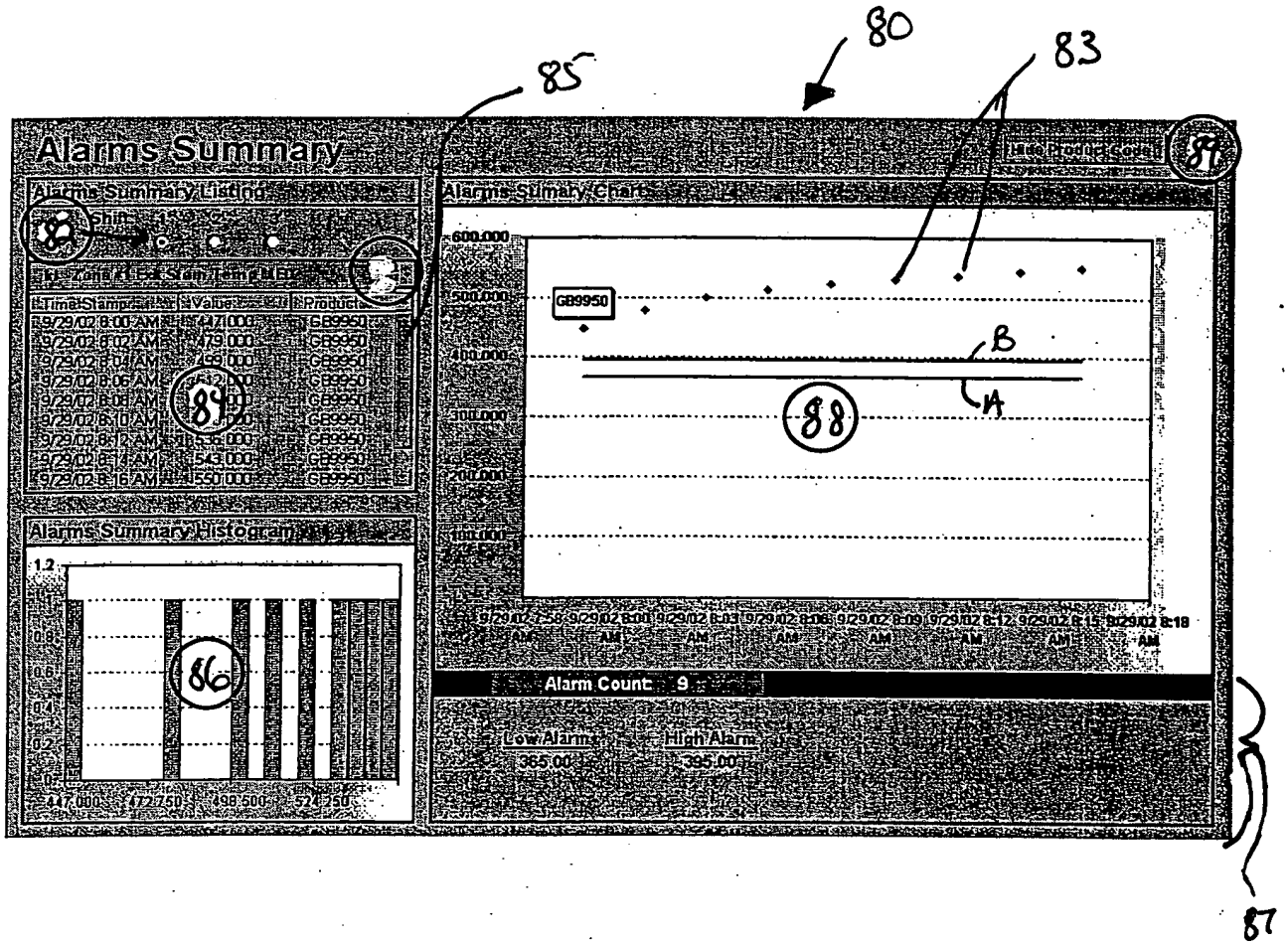

80
83
85
Alarms Summary
Alarms Summary Listing
Alarms Summary Chart
Alarms Summary Histogram
Shift
Time Stamp
Value
Product
GB9950
600.000
500.000
400.000
300.000
200.000
100.000
B
A
88
89
86
87
Alarm Count 9
Low Alarm
High Alarm
365.00
395.00
447.000
472.750
498.500
524.250

Fig. 3

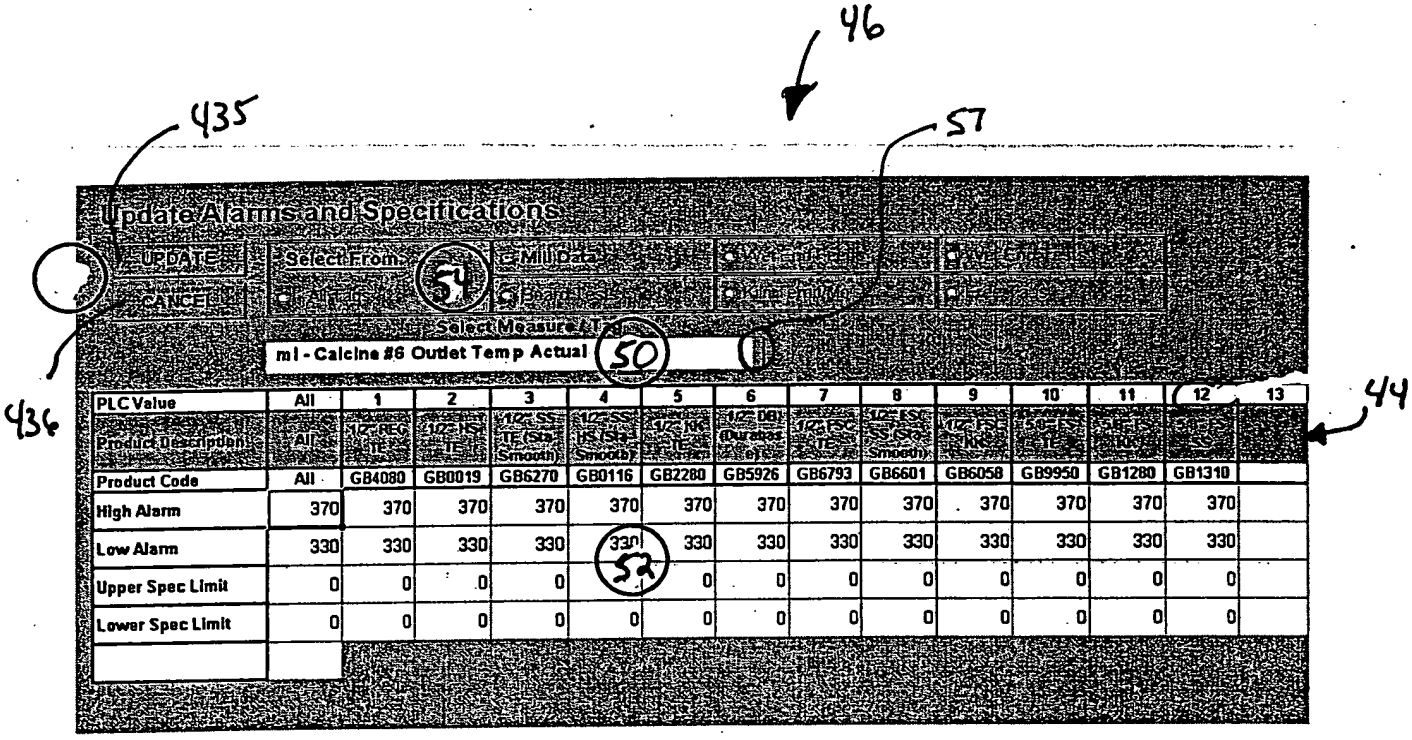
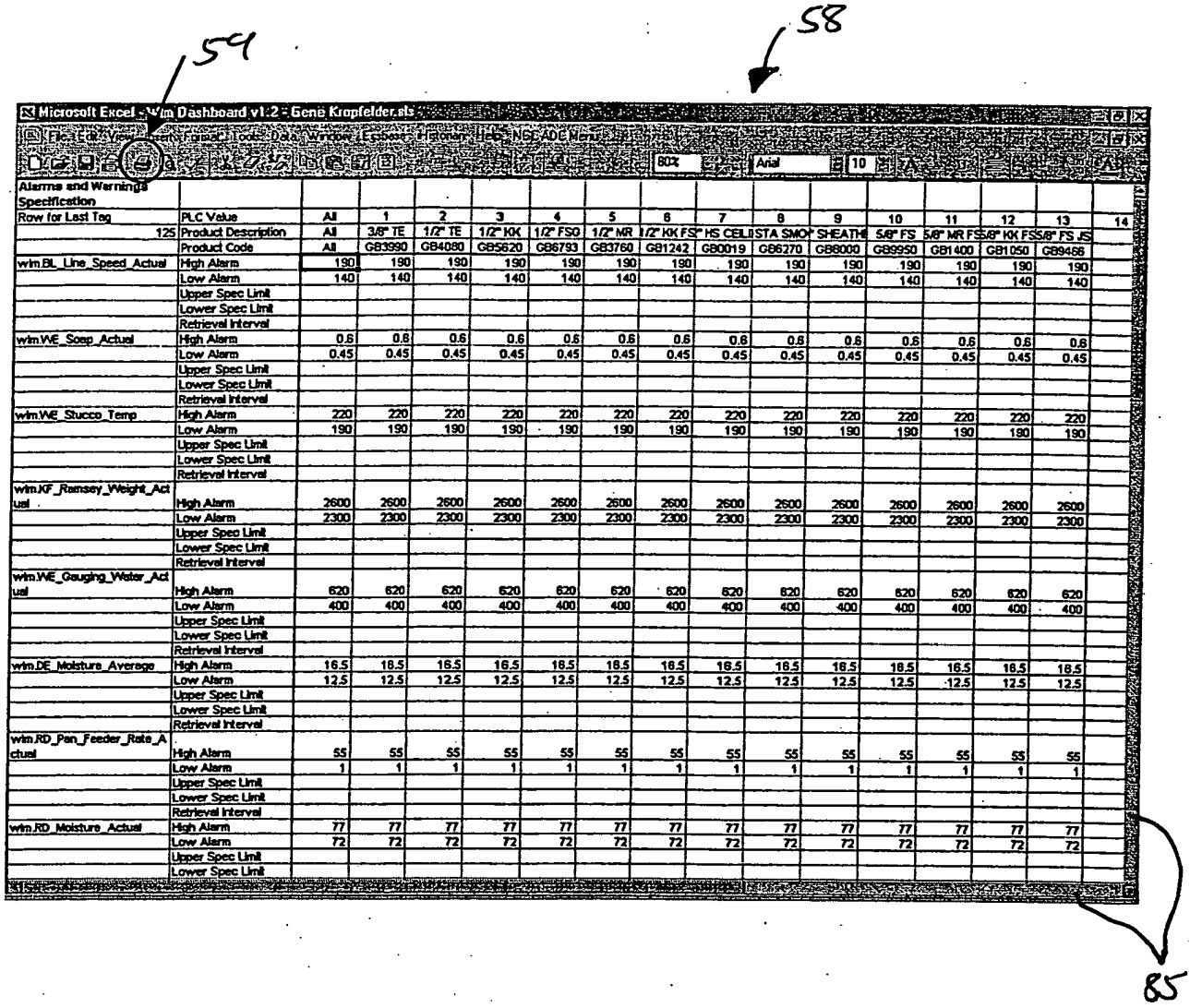

46
435
57
Update Alarms and Specifications
UPDATE
CANCEL
Select From:
54
Mill Data
Select Measure:
ml - Calcine #6 Outlet Temp Actual
50
436
44
PLC Value
Product Description
Product Code
All
GB4080
GB0019
GB6270
GB0116
GB2280
GB5926
GB6793
GB6601
GB6058
GB9950
GB1280
GB1310
High Alarm
370
Low Alarm
330
Upper Spec Limit
0
Lower Spec Limit
0
52

Fig. 4a



Alarms and Warnings Specification																
Row for Last Tag	PLC Value	All	1	2	3	4	5	6	7	8	9	10	11	12	13	14
125	Product Description	All	3/8" TE	1/2" TE	1/2" KK	1/2" FSO	1/2" MR	1/2" KK FS	" HS CELL	STA SMO	SHEATHI	5/8" FS	5/8" MR FS	5/8" KK FS	5/8" FS JS	
	Product Code	All	GB3990	GB4080	GB5620	GB6793	GB3760	GB1242	GB0019	GB6270	GB8000	GB9950	GB1400	GB1050	GB9466	
wim.BL_Line_Speed_Actual	High Alarm	190	190	190	190	190	190	190	190	190	190	190	190	190	190	
	Low Alarm	140	140	140	140	140	140	140	140	140	140	140	140	140	140	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.WE_Soap_Actual	High Alarm	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
	Low Alarm	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.WE_Stucco_Temp	High Alarm	220	220	220	220	220	220	220	220	220	220	220	220	220	220	
	Low Alarm	190	190	190	190	190	190	190	190	190	190	190	190	190	190	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.KF_Ramsey_Weight_Actual	High Alarm	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	
	Low Alarm	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.WE_Gauging_Water_Actual	High Alarm	620	620	620	620	620	620	620	620	620	620	620	620	620	620	
	Low Alarm	400	400	400	400	400	400	400	400	400	400	400	400	400	400	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.DE_Moisture_Average	High Alarm	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.5	
	Low Alarm	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.RD_Pan_Feeder_Rate_Actual	High Alarm	55	55	55	55	55	55	55	55	55	55	55	55	55	55	
	Low Alarm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	Upper Spec Limit															
	Lower Spec Limit															
	Retrieval Interval															
wim.RD_Moisture_Actual	High Alarm	77	77	77	77	77	77	77	77	77	77	77	77	77	77	
	Low Alarm	72	72	72	72	72	72	72	72	72	72	72	72	72	72	
	Upper Spec Limit															
	Lower Spec Limit															

Fig. 46

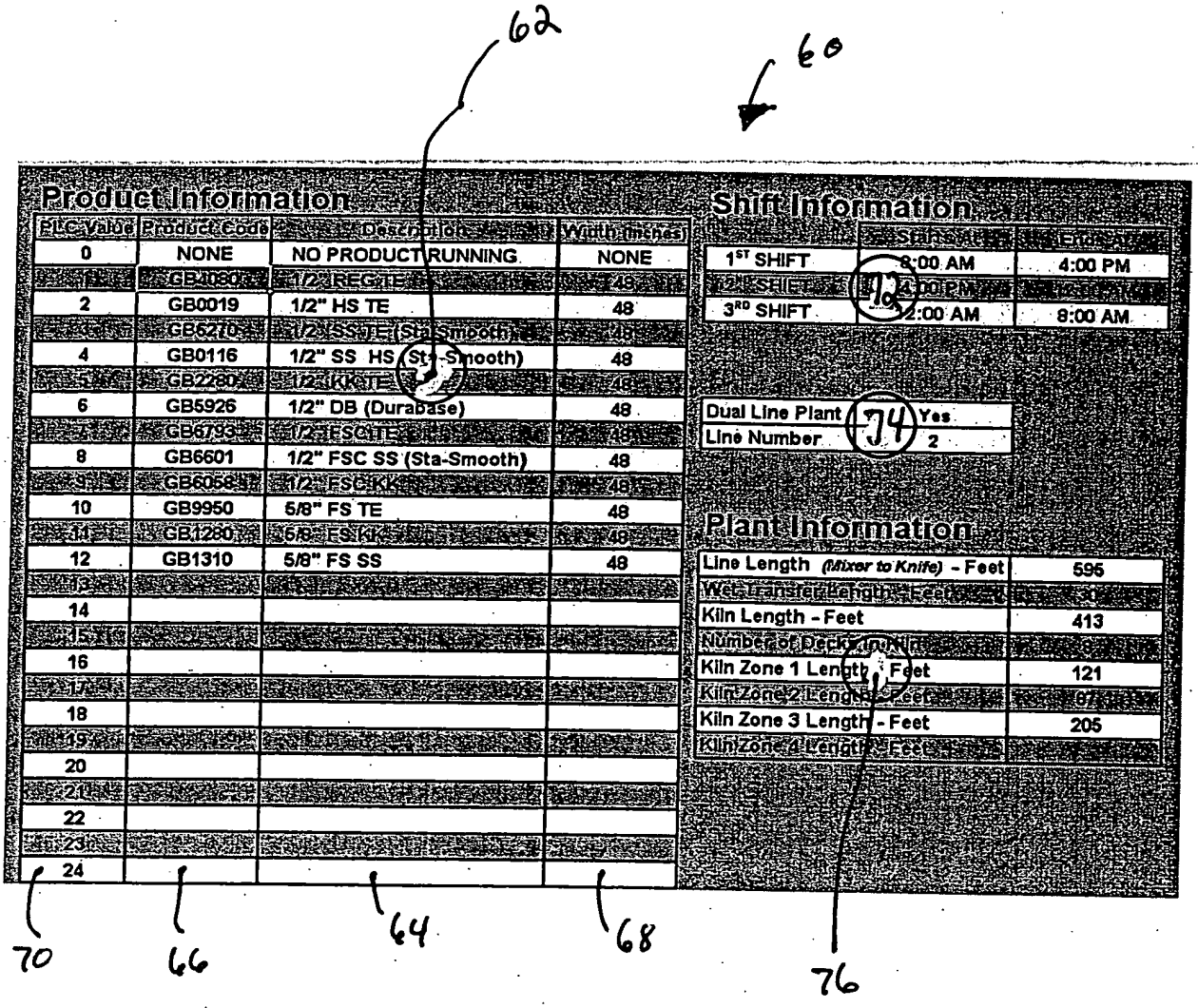

62
60
Product Information
PLC Value
Product Code
Description
Width (inches)
0
NONE
NO PRODUCT RUNNING
NONE
2
GB0019
1/2" HS TE
48
4
GB0116
1/2" SS HS (Sta-Smooth)
48
6
GB5926
1/2" DB (Durabase)
48
8
GB6601
1/2" FSC SS (Sta-Smooth)
48
10
GB9950
5/8" FS TE
48
12
GB1310
5/8" FS SS
48
14
16
18
20
22
24
Shift Information
1ST SHIFT
8:00 AM
4:00 PM
3RD SHIFT
12:00 AM
8:00 AM
Dual Line Plant
Yes
Line Number
2
Plant Information
Line Length (Mixer to Knife) - Feet
595
Kiln Length - Feet
413
Kiln Zone 1 Length - Feet
121
Kiln Zone 3 Length - Feet
205
70
66
64
68
74
76

Fig. 5

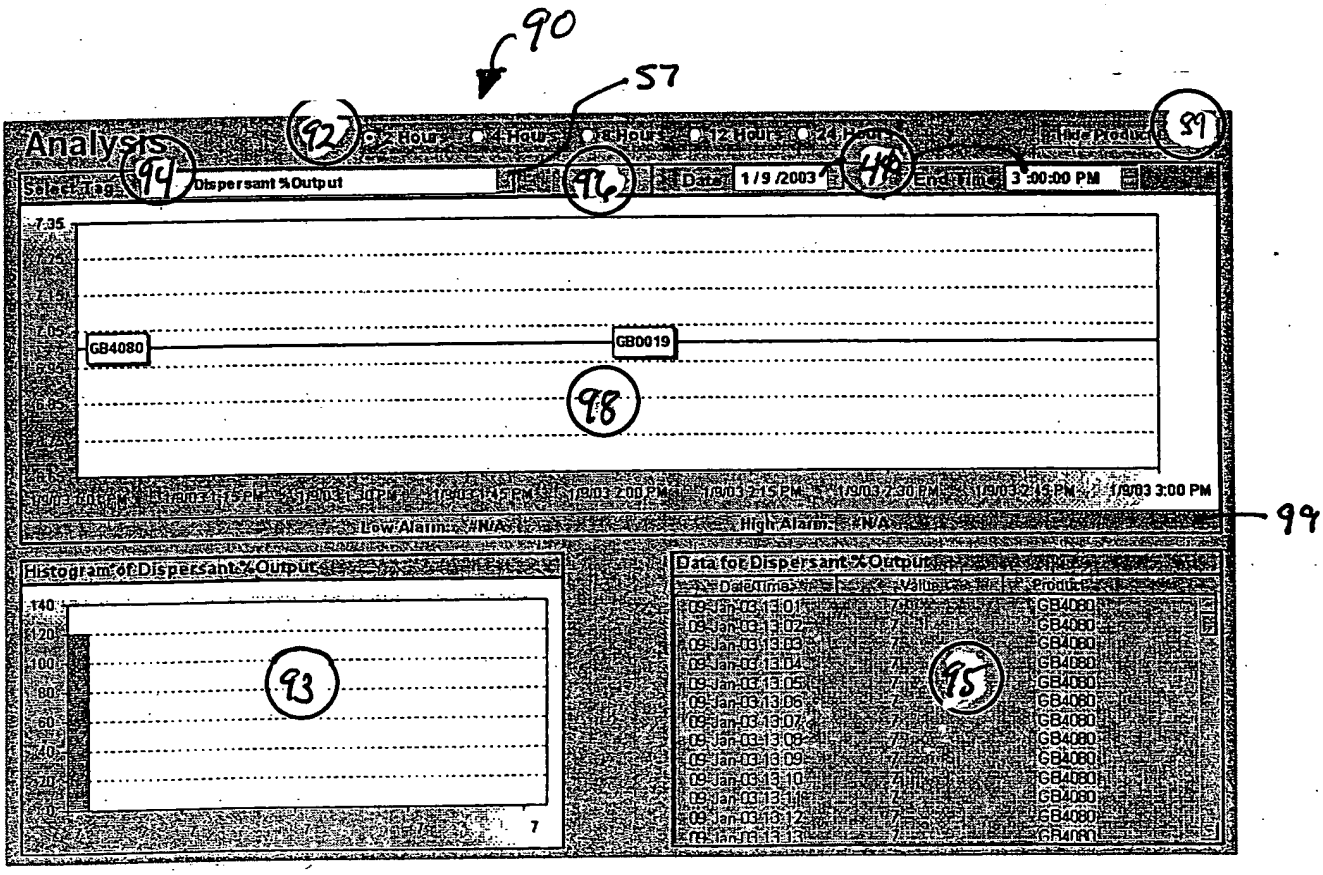

90
57
Analysis
92
1 Hour
4 Hour
8 Hour
12 Hour
24 Hour
89
Select Tag
94
Dispersant %Output
96
Date
1/9/2003
48
End Time
3:00:00 PM
7.35
GB4080
GB0019
98
1/9/03 2:00 PM
1/9/03 2:15 PM
1/9/03 2:30 PM
1/9/03 2:45 PM
1/9/03 3:00 PM
99
Low Alarm: #N/A
High Alarm: #N/A
Histogram of Dispersant %Output
140
120
100
80
60
40
20
0
93
7
Data for Dispersant %Output
DateTime
Value
Product
09-Jan-03 13:01
09-Jan-03 13:02
09-Jan-03 13:03
09-Jan-03 13:04
09-Jan-03 13:05
09-Jan-03 13:06
09-Jan-03 13:07
09-Jan-03 13:08
09-Jan-03 13:09
09-Jan-03 13:10
09-Jan-03 13:11
09-Jan-03 13:12
GB4080
95

Fig. 6

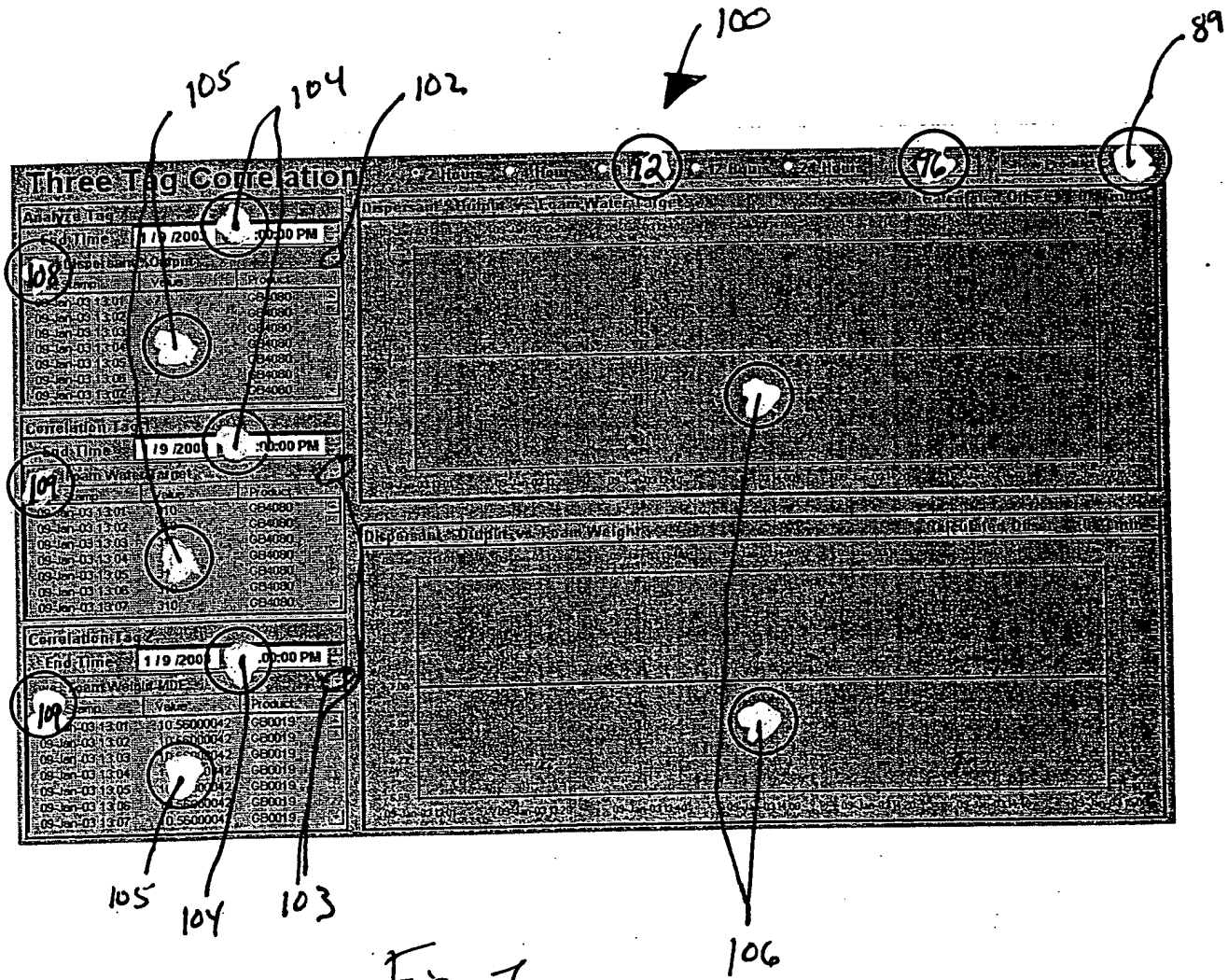

100
89
105
104
102
Three Tag Correlation
108
109
109
105
104
103
106

Fig. 1

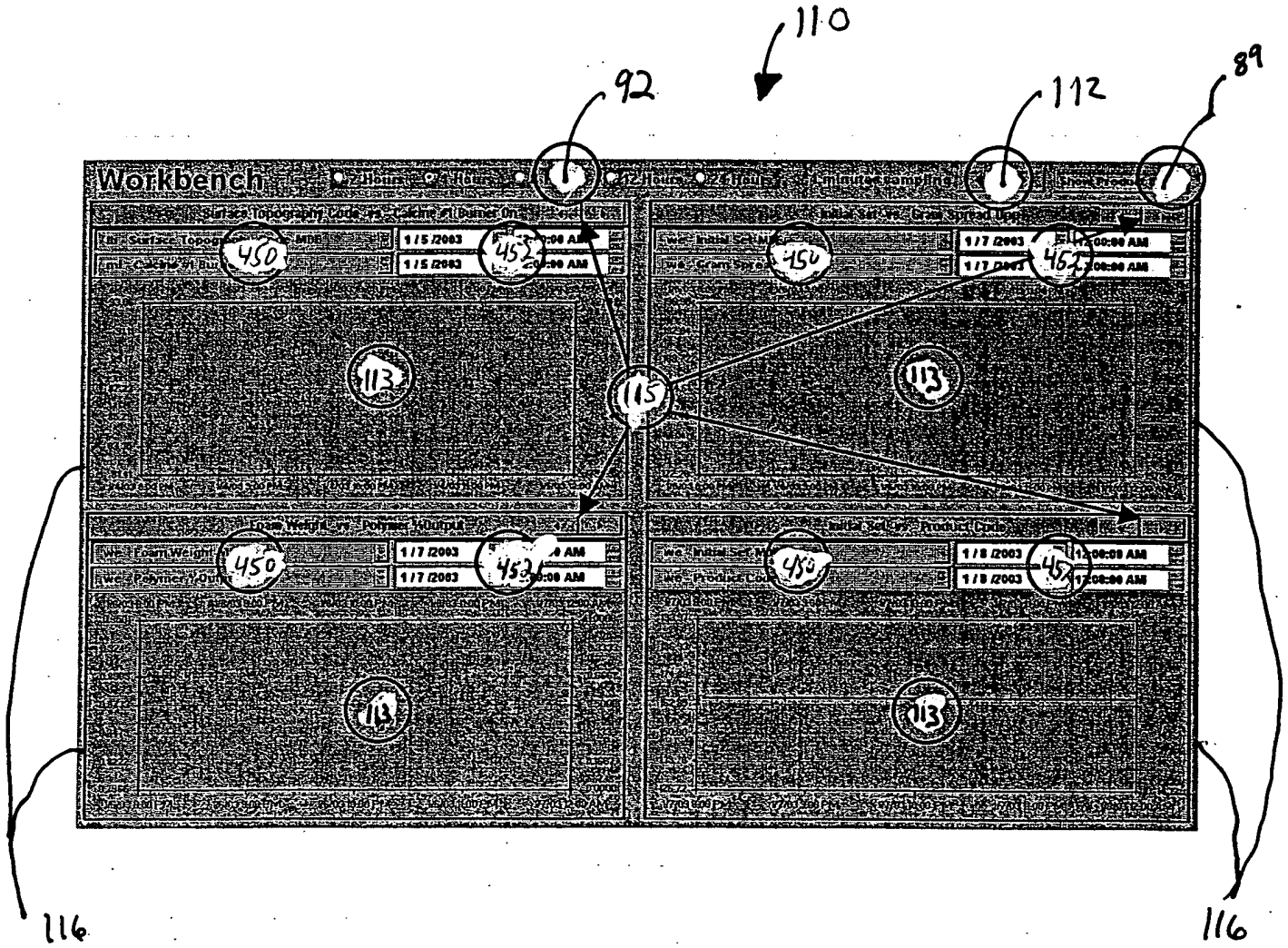


Fig. 8

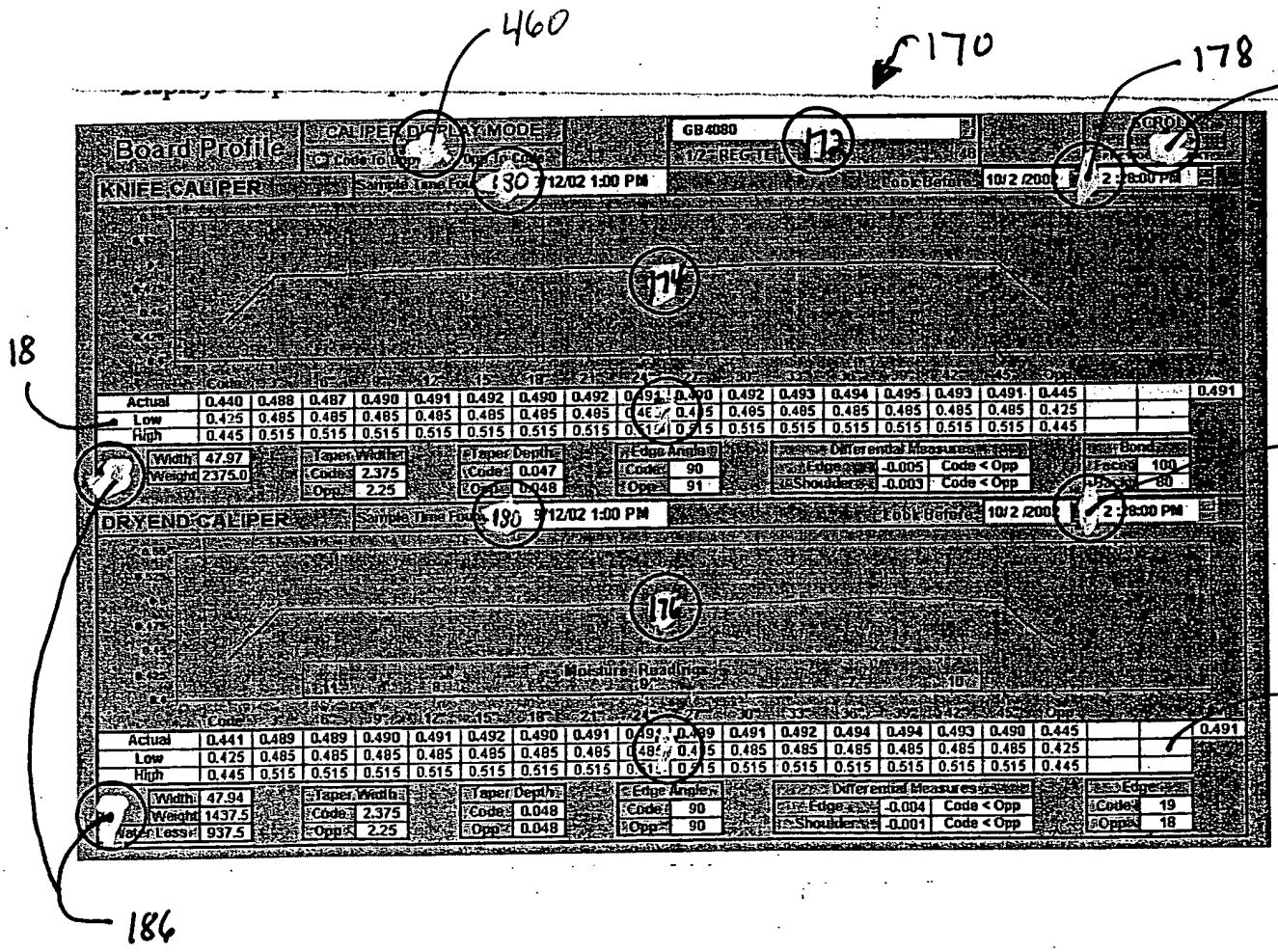

460
170
178
188
Board Profile
CALIPER DISPLAY MODE
GB4080
KNIFE CALIPER
Sample Time Fou
12/02 1:00 PM
Look Before
10/2 /200
2 : 8:00 PM
174
Actual 0.440 0.488 0.487 0.490 0.491 0.492 0.490 0.492 0.493 0.494 0.495 0.493 0.491 0.445 0.491
Low 0.425 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.425
High 0.445 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.445
Width 47.97
Weight 2375.0
Taper Width
Code 2.375
Opp 2.25
Taper Depth
Code 0.047
Opp 0.048
Edge Angle
Code 90
Opp 91
Differential Measures
Edge -0.005 Code < Opp
Shoulders -0.003 Code < Opp
Focus 100
80
DRYEND CALIPER
Sample Time Fou
12/02 1:00 PM
Look Before
10/2 /200
2 : 8:00 PM
176
Moisture Readings
Actual 0.441 0.489 0.489 0.490 0.491 0.492 0.490 0.491 0.491 0.492 0.494 0.494 0.493 0.490 0.445 0.491
Low 0.425 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.485 0.425
High 0.445 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.515 0.445
Width 47.94
Weight 1437.5
Water Less 937.5
Taper Width
Code 2.375
Opp 2.25
Taper Depth
Code 0.048
Opp 0.048
Edge Angle
Code 90
Opp 90
Differential Measures
Edge -0.004 Code < Opp
Shoulders -0.001 Code < Opp
Edge
Code 19
Opp 18
18
180
178
184
186

Fig. 9

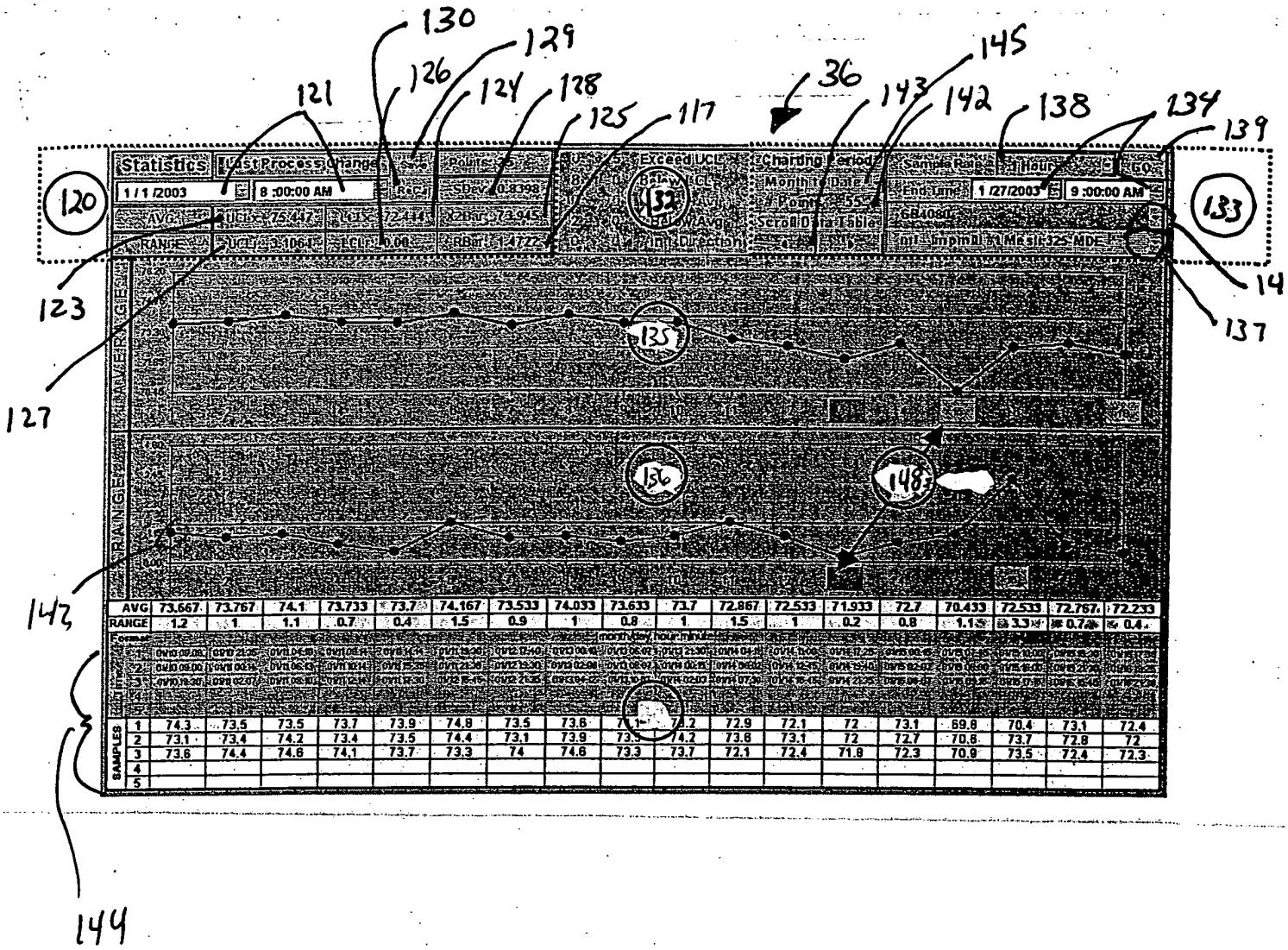

Statistics
Last Process Change
1 / 1 /2003
8 :00:00 AM
AVG
RANGE
UCL 75.447
LCL 72.114
UCL 3.106
LCL 0.00
Points
SDev 0.8398
RBar 1.4772
X2Bar 73.945
Exceed UCL
Below LCL
Below Avg
Direction
Charting Period
Month
Date
Points 55
Scroll Data Table
Sample Rate 1 Hour
End Time 1 /27/2003 9 :00:00 AM
GB4080
mi mpmi TIMESLICE MDE
AVERAGES
RANGES
AVG 73.667 73.767 74.1 73.733 73.7 74.167 73.533 74.033 73.633 73.7 72.867 72.533 71.933 72.7 70.433 72.533 72.767 72.233
RANGE 1.2 1 1.1 0.7 0.4 1.5 0.9 1 0.8 1 1.5 1 0.2 0.8 1.1 3.3 0.7 0.4
SAMPLES
1 74.3 73.5 73.5 73.7 73.9 74.8 73.5 73.6 74.1 74.2 72.9 72.1 72 73.1 69.8 70.4 73.1 72.4
2 73.1 73.4 74.2 73.4 73.5 74.4 73.1 73.9 73.5 74.2 73.6 73.1 72 72.7 70.6 73.7 72.8 72
3 73.6 74.4 74.6 74.1 73.7 73.3 74 74.6 73.3 73.7 72.1 72.4 71.8 72.3 70.9 73.5 72.4 72.3
4
5
120
121
123
124
125
126
127
128
129
130
133
134
135
136
137
138
139
142
143
144
145
148

Fig. 10

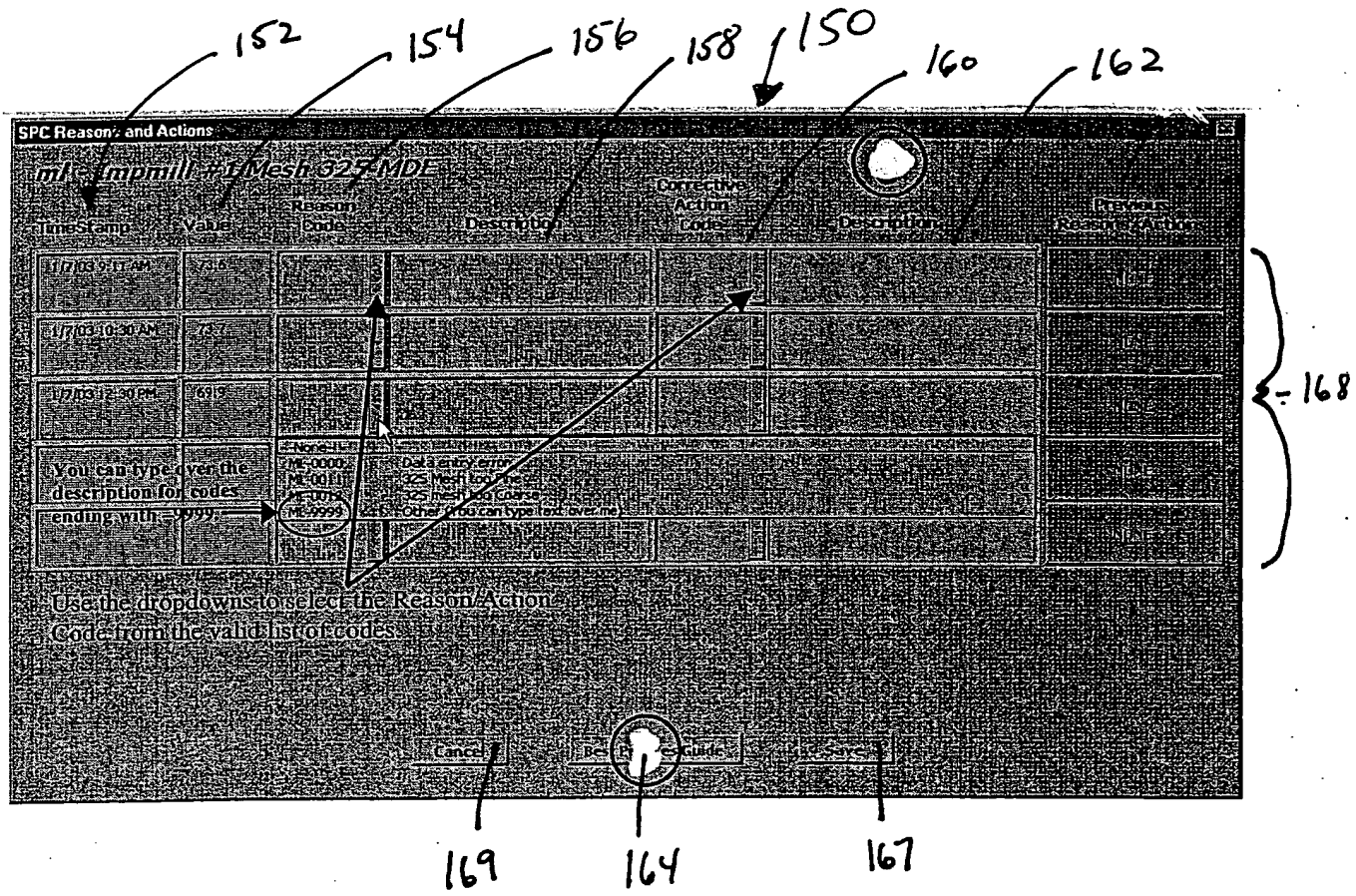

152
154
156
158
150
160
162
SPC Reasons and Actions
mfg: tmpmill #1 Mesh 325 MDE
Time Stamp
Value
Reason Code
Description
Corrective Action Codes
Description
Reason/Action
1/7/03 9:17 AM
1/7/03 10:30 AM
73
1/7/03 12:30 PM
69.5
You can type over the description for codes ending with "9999"
ME-0000
ME-0001
ME-0002
ME-9999
Use the dropdowns to select the Reason/Action Code from the valid list of codes.
Cancel
Guide
Save
168
169
164
167

Fig. 11a

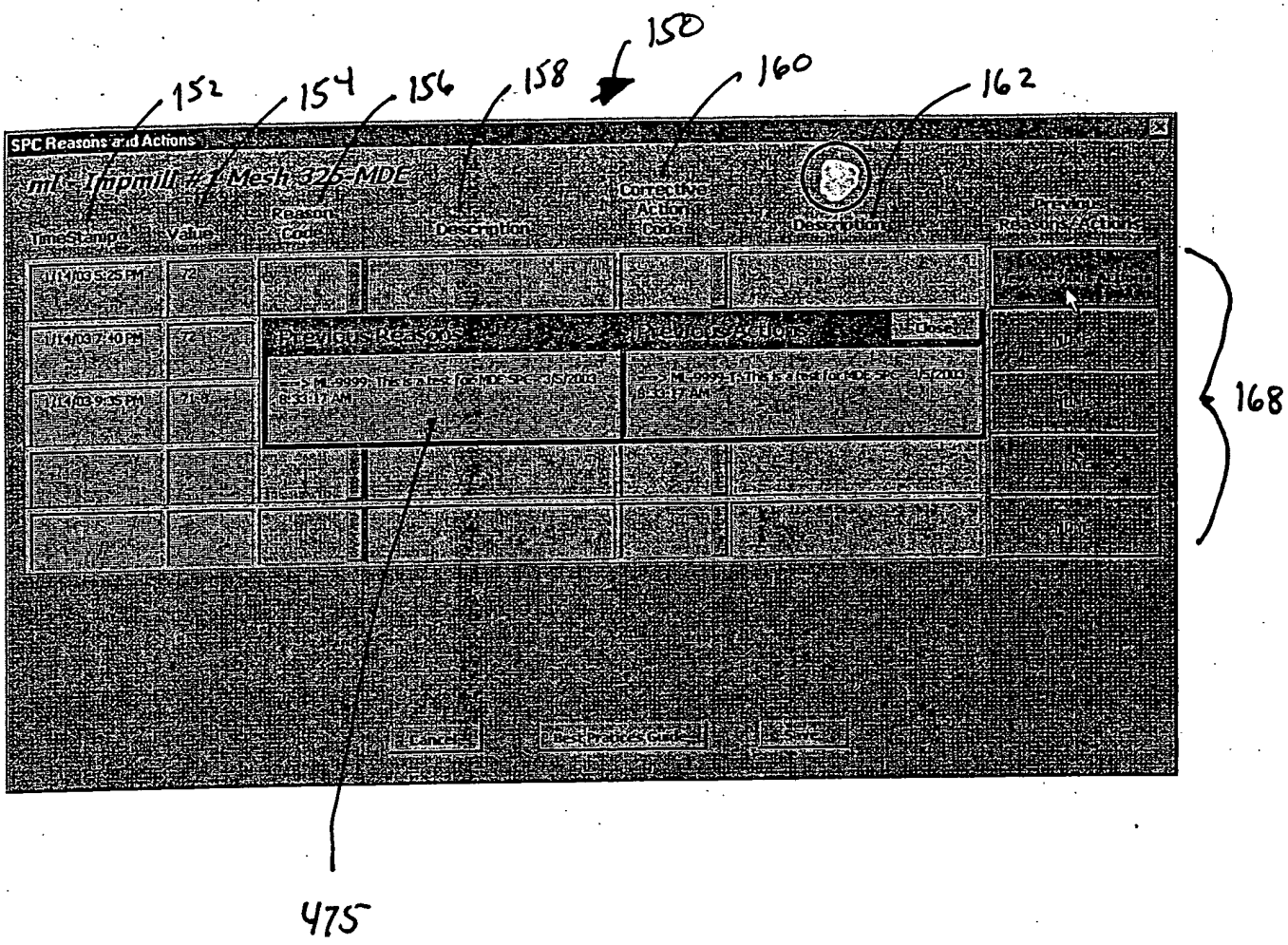

150
152
154
156
158
160
162
SPC Reasons and Actions
mt_Tripmill #1 Mesh 326-MDE
TimeStamp
Value
Reason Code
Description
Corrective Action Code
Description
Previous Reasons/Actions
Previous Reasons
Previous Actions
Close
168
475

Fig. 11b

The goal of this SOP is to produce stucco that is calcined below theoretical with as few adjustments as possible.

Best Practice / S.O.P 166

---

1. COMBINED WATER OF STUCCO EXCEEDS THE UPPER LIMIT.

MAKE SURE THE GRINDS ARE IN THE REASONABLE LIMITS.
(COARSE GRINDS WILL CAUSE THE MOISTURES TO GO UP)

EXAMINE THE HISTORY OF PREVIOUS MOISTURE'S.
(2 SAMPLES IN A ROW HIGH OR MOST OF THE SAMPLES WERE HIGH)

EXAMINE THE PURITY.
(IF THE PURITY WENT UP QUITE A BIT, THE MOISTURE'S WILL GET HIGHER)

IF GRINDS ARE OUT OF THE CONTROL LIMITS, THEY NEED TO BE LINED OUT BEFORE ANY ADJUSTMENTS ARE MADE TO THE CALCIDYNE'S.

IF GRINDS ARE IN THE CONTROL LIMITS AND PURITY IS STABLE AND SAMPLE STILL EXCEEDS THE UPPER LIMITS THEN AN ADJUSTMENT TO THE CALCIDYNE NEEDS TO BE MADE.

WHEN THE PURITY GOES UP, IT MAY TAKE SOME TIME FOR THE CALCIDYNE'S TO ADJUST, NO NEED TO MAKE ADJUSTMENTS RIGHT AWAY. RUN A COUPLE OF SAMPLES AND SEE IF THEY WILL ADJUST BY THEMSELVES. IF NOT MAKE AN ADJUSTMENT.

2. COMBINED WATER OF STUCCO IS LESS THAN THE LOWER LIMIT

MAKE SURE THE GRINDS ARE IN THE REASONABLE LIMITS.
(FINE GRINDS WILL CAUSE THE MOISTURES TO GO DOWN)

EXAMINE THE HISTORY OF PREVIOUS MOISTURE'S.
(2 SAMPLES IN A ROW LOW OR MOST OF THE SAMPLES WERE LOW)

EXAMINE THE PURITY.
(IF THE PURITY WENT DOWN QUITE A BIT, THE MOISTURE'S WILL GET LOWER)

IF GRINDS ARE OUT OF THE CONTROL LIMITS, THEY NEED TO BE LINED OUT BEFORE ANY ADJUSTMENTS ARE MADE TO THE CALCIDYNE'S.

IF GRINDS ARE IN THE CONTROL LIMITS AND PURITY IS STABLE AND SAMPLE STILL EXCEEDS THE LOWER LIMITS THEN AN ADJUSTMENT TO THE CALCIDYNE NEEDS TO BE MADE.

Fig. 12

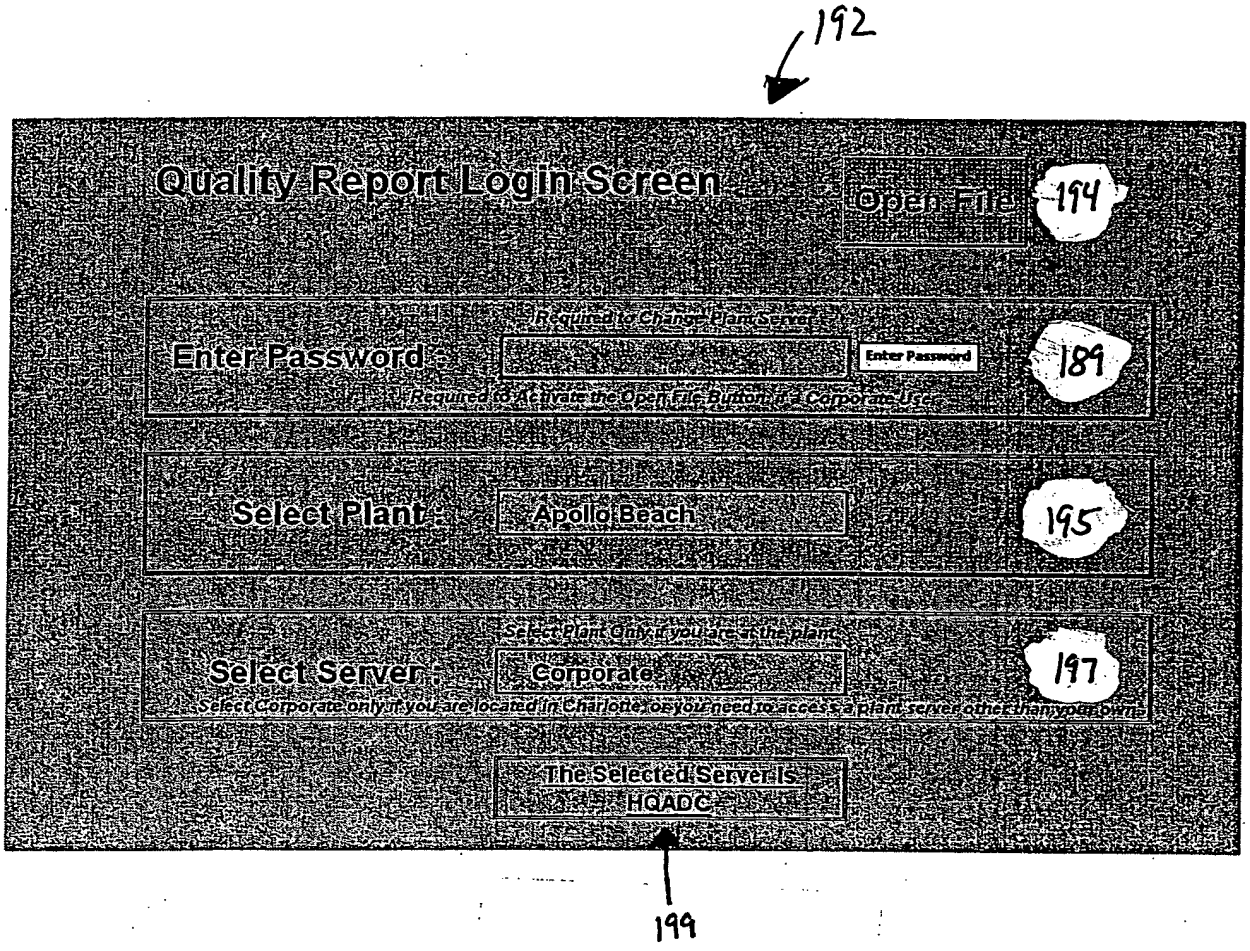

192
Quality Report Login Screen
Open File
194
Required to Change Plant Server
Enter Password
Enter Password
189
Required to Activate the Open File Button for Corporate Use
Select Plant
Apollo Beach
195
Select Plant Only if you are at the plant
Select Server
Corporate
197
Select Corporate only if you are located in Charlotte or you need to access a plant server other than your own
The Selected Server Is:
HQADC
199

Fig. 13

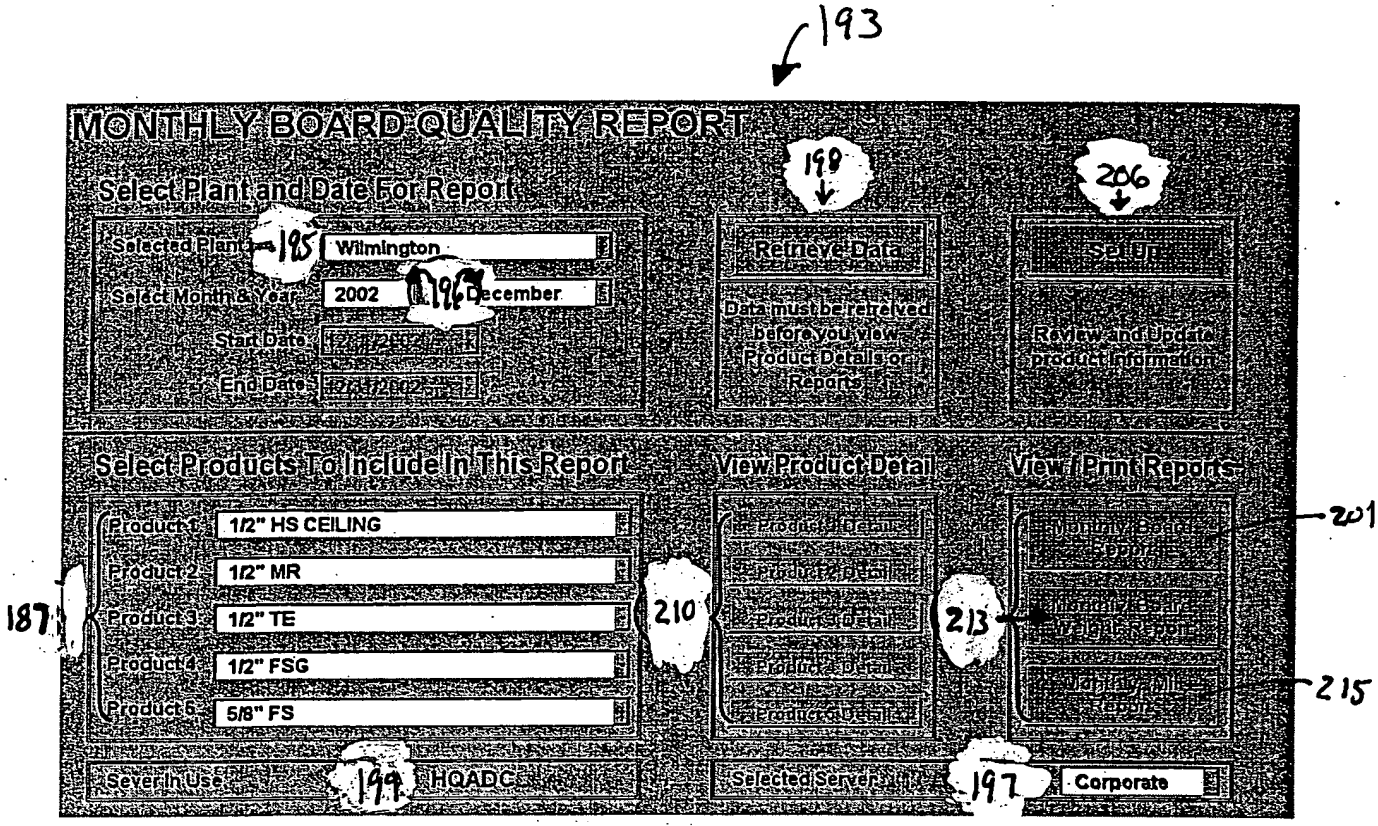

193
MONTHLY BOARD QUALITY REPORT
198
206
Select Plant and Date For Report
Selected Plant
195
Wilmington
Select Month & Year
2002
196
December
Start Date
End Date
Retrieve Data
Data must be retrieved before you view Product Details or Reports
Set Up
Review and Update product information
Select Products To Include In This Report
View Product Detail
View / Print Reports
201
Product 1
1/2" HS CEILING
Product 2
1/2" MR
Product 3
1/2" TE
Product 4
1/2" FSG
Product 6
5/8" FS
187
210
213
215
Sever In Use
199
HQADC
Selected Server
197
Corporate

Fig. 14

MONTHLY BOARD QUALITY REPORT

1200

PRODUCT CODE AND DESCRIPTION	GB4080 401 1/2" REG TE	GB9950 401 5/8" FS TE	GB2280 401 1/2" KK TE	GB0019 401 1/2" HS TE	GB0116 401 1/2" SS HS (SEA Smooth)
Lab 402	**NAIL PULL - lbs of force**				
Number of samples	75	22	1	9	4
Specification (Min)	80.0	90.0	80.0	80.0	80.0
3-Month Rolling Average	71.4	84.8	82.1	70.6	70.9
Standard Deviation	2.722	4.458		2.985	3.081
Year-to-Date Average	71.4	84.8	82.1	70.6	70.9
Prior Year Average	74.886	89.838	85.750	77.067	76.100
Cpk	**-1.049**	**-0.391**		**-1.046**	**-0.990**
Est. Defects Per 1,000 Units	**> 500**	**> 500**		**> 500**	**> 500**
Cp	**-1.049**	**-0.391**		**-1.046**	**-0.990**
Lab	**CORE HARDNESS - lbs of force**				
Number of samples	68	21	1	9	4
Specification (Min)	15.0	15.0	15.0	15.0	15.0
3-Month Rolling Average	17.1	23.0	19.3	17.1	16.3
Standard Deviation	1.366	1.750		1.054	0.831
Year-to-Date Average	17.1	23.0	19.3	17.1	16.3
Prior Year Average	18.276	23.056	17.333	18.389	16.889
Cpk	**0.518**	**1.514**		**0.668**	**0.535**
Est. Defects Per 1,000 Units	**80**	**< 1**		**40**	**80**
Cp	**0.518**	**1.514**		**0.668**	**0.535**
Lab	**EDGE HARDNESS - CODE - lbs of force**				
Number of samples	67	21	1	8	4
Specification (Min)	15.0	15.0	15.0	15.0	15.0
3-Month Rolling Average	56.1	72.4	64.3	56.5	51.7
Standard Deviation	4.725	9.285		6.644	7.193
Year-to-Date Average	56.1	72.4	64.3	56.5	51.7
Prior Year Average	42.430	64.194	55.000	43.846	47.000
Cpk	**2.900**	**2.061**		**2.080**	**1.703**
Est. Defects Per 1,000 Units	**< 1**	**< 1**		**< 1**	**< 1**
Cp	**2.900**	**2.061**		**2.080**	**1.703**
Lab	**EDGE HARDNESS - OPP CODE - lbs of force**				
Number of samples	66	21	1	8	4
Specification (Min)	15.0	15.0	15.0	15.0	15.0
3-Month Rolling Average	62.1	75.0	79.3	57.7	62.7
Standard Deviation	5.351	7.700		4.366	0.837
Year-to-Date Average	62.1	75.0	79.3	57.7	62.7
Prior Year Average	49.159	60.030	62.222	46.282	47.000
Cpk	**2.934**	**2.599**		**3.261**	**19.016**
Est. Defects Per 1,000 Units	**< 1**	**< 1**		**< 1**	**< 1**
Cp	**2.934**	**2.599**		**3.261**	**19.016**
Lab	**END HARDNESS - lbs of force**				
Number of samples	69	21	1	9	4
Specification (Min)	15.0	15.0	15.0	15.0	15.0
3-Month Rolling Average	16.1	22.2	20.3	16.4	15.2
Standard Deviation	1.385	1.798		0.961	0.638
Year-to-Date Average	16.1	22.2	20.3	16.4	15.2
Prior Year Average	17.829	22.528	18.000	18.028	16.889
Cpk	**0.255**	**1.336**		**0.488**	**0.087**
Est. Defects Per 1,000 Units	**300**	**< 1**		**120**	**> 500**
Cp	**0.255**	**1.336**		**0.488**	**0.087**

Fig. 15

431

Return

214

Monthly Board Weight Report

PLANT : Wilmington

MONTH : February 2003

Save As File

430

1/2" SHEATHING Board	MONTHLY WEIGHT DATA		
	AVG WEIGHT	STD DEV	# OF SAMPLES
December 2002	1719	9	2
January 2003	1713	16	6
February 2003			
March 2003			
April 2003			
May 2003			
June 2003			
July 2003			
August 2003			
September 2003			
October 2003			
November 2003			
December 2003			
YTD AVERAGE	1713	16	6

Fig. 16

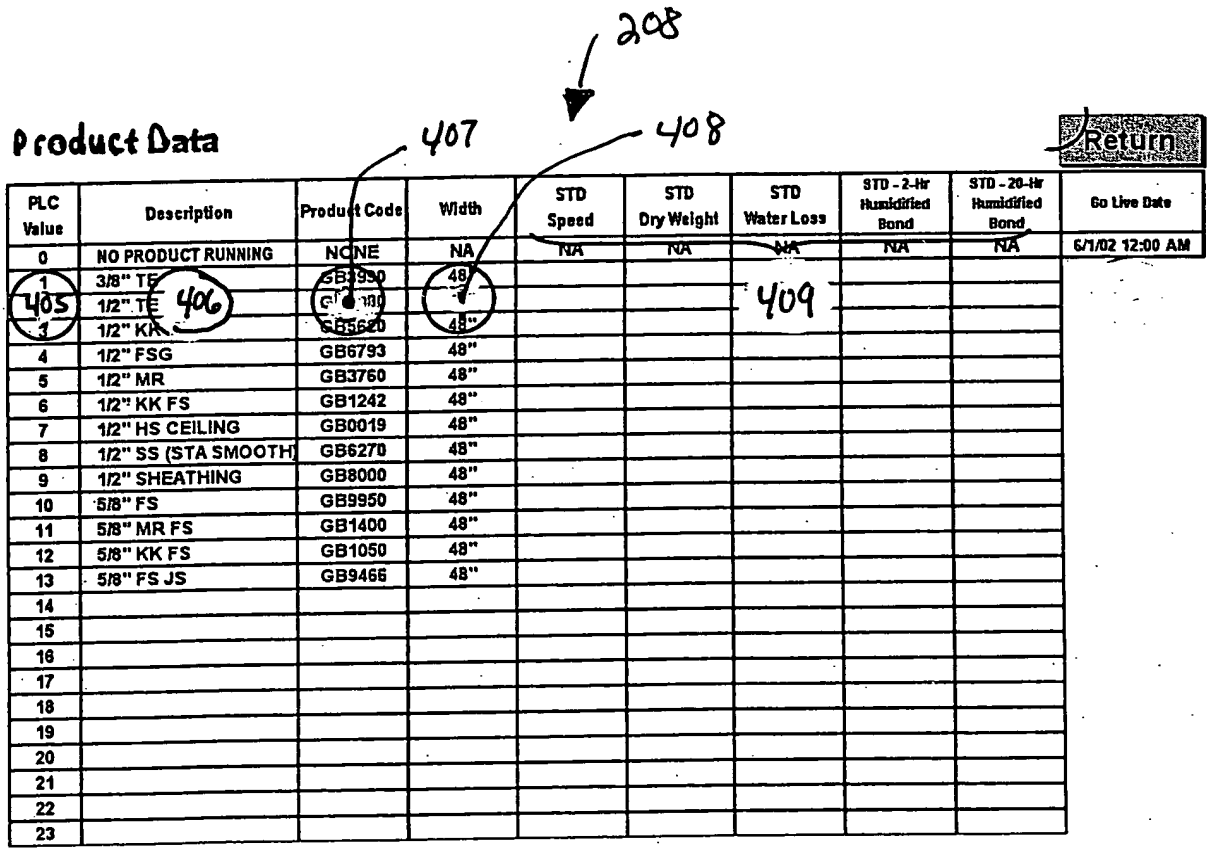

208
Product Data
407
408
Return
PLC Value
Description
Product Code
Width
STD Speed
STD Dry Weight
STD Water Loss
STD - 2-Hr Humidified Bond
STD - 20-Hr Humidified Bond
Go Live Date
0 NO PRODUCT RUNNING NONE NA NA NA NA NA 6/1/02 12:00 AM
1 3/8" TE
405
1/2" TE
406
1/2" KK
GB6793 48"
4 1/2" FSG
GB3760 48"
5 1/2" MR
GB1242 48"
6 1/2" KK FS
GB0019 48"
7 1/2" HS CEILING
GB6270 48"
8 1/2" SS (STA SMOOTH)
GB8000 48"
9 1/2" SHEATHING
GB9950 48"
10 5/8" FS
GB1400 48"
11 5/8" MR FS
GB1050 48"
12 5/8" KK FS
GB9466 48"
13 5/8" FS JS
409
14
15
16
17
18
19
20
21
22
23

Fig. 17

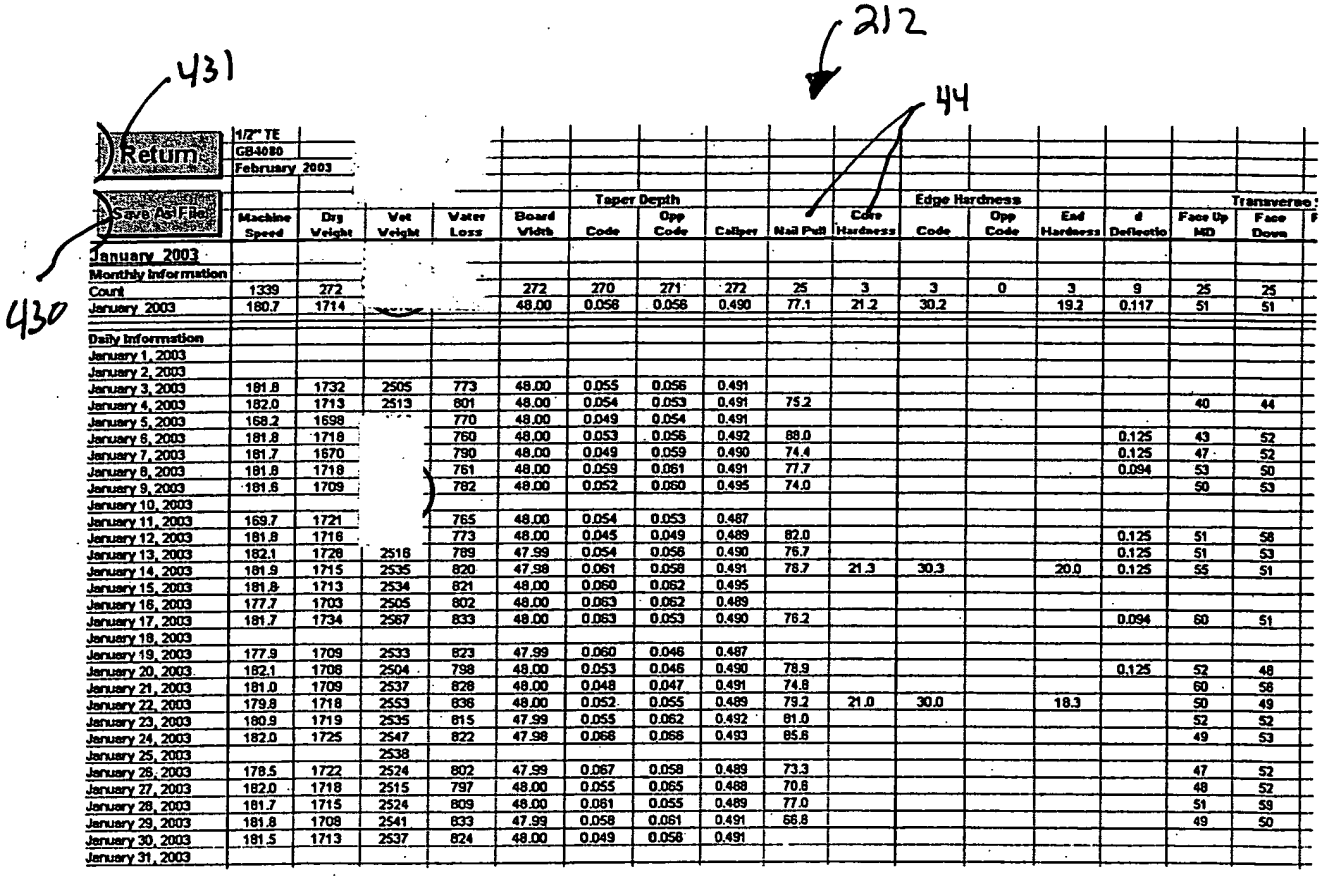

212
431
44
430
Return
1/2" TE
GB4080
February 2003
Save As Rep
Taper Depth
Edge Hardness
Transverse
Machine Speed
Dry Weight
Wet Weight
Water Loss
Board Width
Code
Opp Code
Caliper
Nail Pull
Core Hardness
Code
Opp Code
End Hardness
d Deflectio
Face Up MD
Face Down
January 2003
Monthly Information
Count 1339 272 272 270 271 272 25 3 3 0 3 9 25 25
January 2003 180.7 1714 48.00 0.058 0.058 0.490 77.1 21.2 30.2 19.2 0.117 51 51
Daily Information
January 1, 2003
January 2, 2003
January 3, 2003 181.8 1732 2505 773 48.00 0.055 0.056 0.491
January 4, 2003 182.0 1713 2513 801 48.00 0.054 0.053 0.491 75.2 40 44
January 5, 2003 168.2 1698 770 48.00 0.049 0.054 0.491
January 6, 2003 181.8 1718 760 48.00 0.053 0.056 0.492 88.0 0.125 43 52
January 7, 2003 181.7 1670 790 48.00 0.049 0.059 0.490 74.4 0.125 47 52
January 8, 2003 181.8 1718 761 48.00 0.059 0.061 0.491 77.7 0.094 53 50
January 9, 2003 181.6 1709 782 48.00 0.052 0.060 0.495 74.0 50 53
January 10, 2003
January 11, 2003 169.7 1721 765 48.00 0.054 0.053 0.487
January 12, 2003 181.8 1718 773 48.00 0.045 0.049 0.489 82.0 0.125 51 58
January 13, 2003 182.1 1728 2518 789 47.99 0.054 0.058 0.490 76.7 0.125 51 53
January 14, 2003 181.9 1715 2535 820 47.98 0.061 0.058 0.491 78.7 21.3 30.3 20.0 0.125 55 51
January 15, 2003 181.8 1713 2534 821 48.00 0.060 0.062 0.495
January 16, 2003 177.7 1703 2505 802 48.00 0.063 0.062 0.489
January 17, 2003 181.7 1734 2567 833 48.00 0.063 0.053 0.490 76.2 0.094 60 51
January 18, 2003
January 19, 2003 177.9 1709 2533 823 47.99 0.060 0.046 0.487
January 20, 2003 182.1 1706 2504 798 48.00 0.053 0.045 0.490 78.9 0.125 52 48
January 21, 2003 181.0 1709 2537 826 48.00 0.048 0.047 0.491 74.8 60 58
January 22, 2003 179.8 1718 2553 836 48.00 0.052 0.055 0.489 79.2 21.0 30.0 18.3 50 49
January 23, 2003 180.9 1719 2535 815 47.99 0.055 0.062 0.492 81.0 52 52
January 24, 2003 182.0 1725 2547 822 47.98 0.068 0.068 0.493 85.6 49 53
January 25, 2003 2538
January 26, 2003 178.5 1722 2524 802 47.99 0.067 0.058 0.489 73.3 47 52
January 27, 2003 182.0 1718 2515 797 48.00 0.055 0.065 0.488 70.8 48 52
January 28, 2003 181.7 1715 2524 809 48.00 0.061 0.055 0.489 77.0 51 59
January 29, 2003 181.8 1709 2541 833 47.99 0.058 0.061 0.491 66.8 49 50
January 30, 2003 181.5 1713 2537 824 48.00 0.049 0.058 0.491
January 31, 2003

Fig. 18a

						Taper Depth					Edge Hardness					Transverse S	
	Machine Speed	Dry Weight	Wet Weight	Water Loss	Board Width	Code	Opp Code	Caliper	Nail Pull	Core Hardness	Code	Opp Code	End Hardness	d Deflectio	Face Up MD	Face Down	F
February 2003																	
3-Month Rolling Avg																	
Average	180.6		2511	800	47.997	0.057	0.056	0.490	77.5	21.8	28.8		19.0	0.128	48	50	
Number of Samples	2931	(420	845	54	593	587	588	593	49	3	3	0	3	28	49	49	
LSL					47 29/32	0.050	0.050	0.485	80	15.0	15.0	15.0	15.0		40	40	
USL					48	0.090	0.090	0.515						1.250			
Std Dev	3.464	55.565	45.956	33.603	0.018	0.020	0.017	0.004	4.387	1.072	2.411		0.882	0.025	4.442	3.550	1
Std Dev / 1.7321	2.000	31.967	26.533	19.400	0.009	0.011	0.010	0.002	2.533	0.619	1.392		0.509	0.014	2.564	2.050	
Cpku					0.115	0.948	1.176	3.890						26.368			
Cpld					3.230	0.217	0.222	0.829	-0.334	3.652	3.299		2.619		1.037	1.668	
Cpk					0.115	0.217	0.222	0.829	-0.334	3.652	3.299		2.619	26.368	1.037	1.668	
Cp					1.673	0.583	0.699	2.359	-0.334	3.652	3.299		2.619	26.368	1.037	1.668	
3-Month Period Ending																	
January	181.1	1712	2509	796	48.00	0.058	0.056	0.490	77.5	21.8	28.8		19.0	0.128	48	50	
February	180.6		2511	800	48.00	0.057	0.056	0.490	77.5	21.8	28.8		19.0	0.128	48	50	
March	179.9	(421	2517	807	48.00	0.056	0.057	0.491	77.1	21.2	30.2		19.2	0.117	51	51	
April	177.0		2527	835	48.00	0.053	0.057	0.492									
May																	
June																	
July																	
August																	
September																	
October																	
November																	
December																	

Fig. 18b

						Taper Depth					Edge Hardness					Transverse	
	Machine Speed	Dry Weight	Wet Weight	Water Loss	Board Width	Code	Opp Code	Caliper	Nail Pull	Core Hardness	Code	Opp Code	End Hardness	d Deflectio	Face Up MD	Face Down	F
Current Year Info																	
Year-to-date Avg	179.9	1710	2517	807	48.00	0.056	0.057	0.491	77.1	21.2	30.2		19.2	0.117	51	51	
Entire Year Avg	179.9	(422)	2517	807	48.00	0.056	0.057	0.491	77.1	21.2	30.2		19.2	0.117	51	51	
December (Last Year)	181.5	[illegible]	2502	791	48.00	0.060	0.056	0.490	77.8	23.0	26.0		18.7	0.133	45	49	
January	180.7	1714	2515	801	48.00	0.058	0.056	0.490	77.1	21.2	30.2		19.2	0.117	51	51	
February	177.0	1692	2527	835	48.00	0.053	0.057	0.492									
		(423)															
Prior Year Info																	
Overwrite iHistorian Data																	
Enter Year Avg		Enter the correct information on this line															
iHistorian Data																	
Entire Year Avg	176.1	(422	2502	791	48.00	0.060	0.056	0.490	77.8	23.0	26.0		18.7	0.133	45	49	
Year-to-date Avg																	
Entire Year Avg	176.1	[illegible]	2502	791	48.00	0.060	0.056	0.490	77.8	23.0	26.0		18.7	0.133	45	49	

424

Fig. 18c

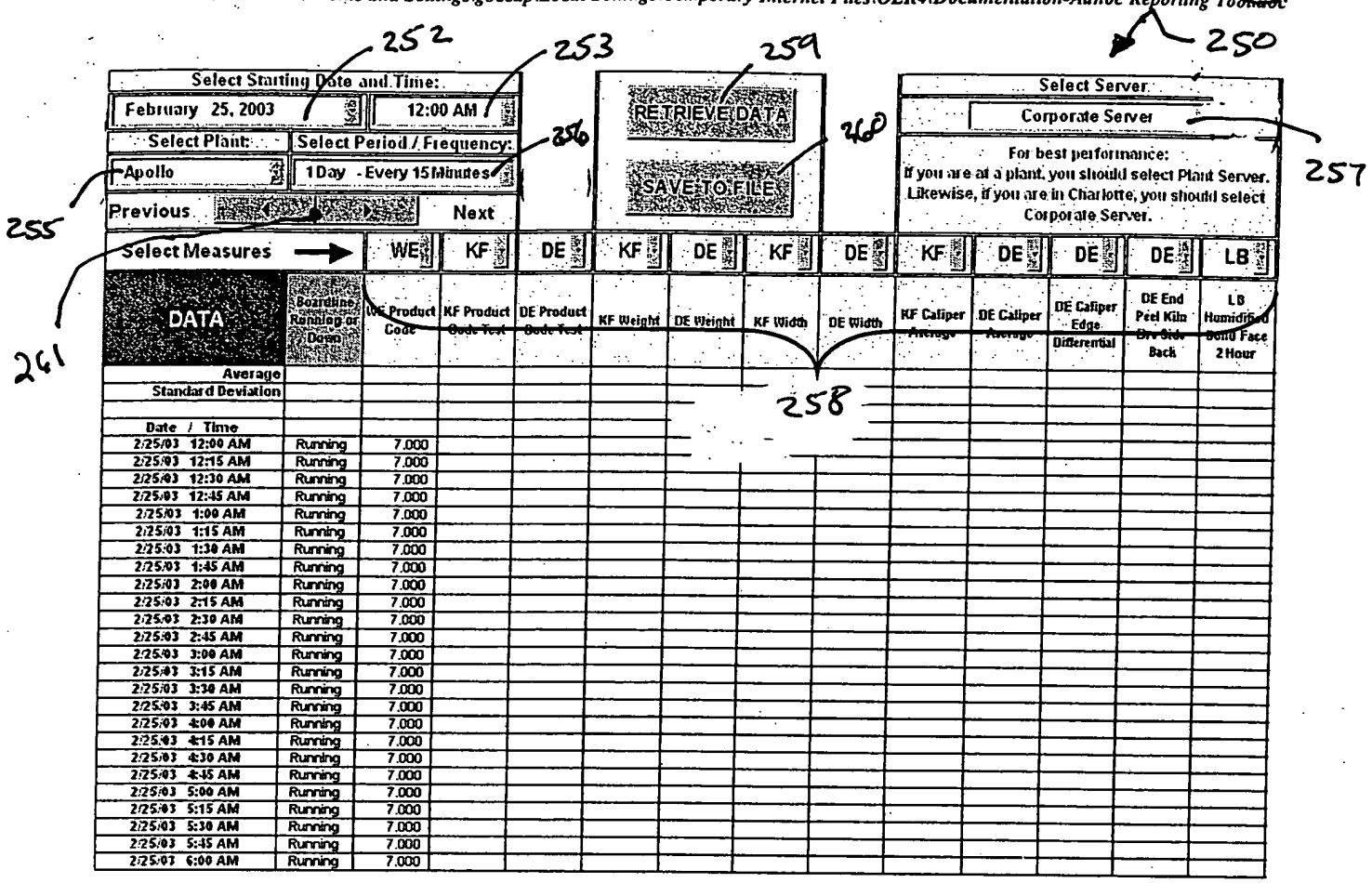


Fig. 19

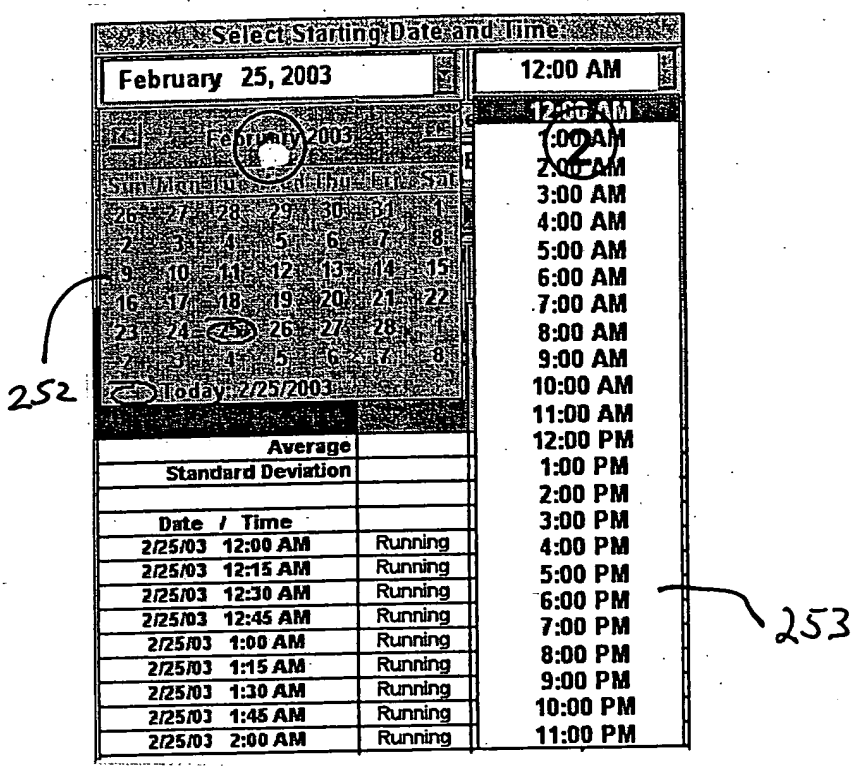

Select Starting Date and Time
February 25, 2003
12:00 AM
February 2003
Sun Mon Tue Wed Thu Fri Sat
26 27 28 29 30 31 1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 1
2 3 4 5 6 7 8
Today: 2/25/2003
12:00 AM
1:00 AM
2:00 AM
3:00 AM
4:00 AM
5:00 AM
6:00 AM
7:00 AM
8:00 AM
9:00 AM
10:00 AM
11:00 AM
12:00 PM
1:00 PM
2:00 PM
3:00 PM
4:00 PM
5:00 PM
6:00 PM
7:00 PM
8:00 PM
9:00 PM
10:00 PM
11:00 PM
Average
Standard Deviation
Date / Time
2/25/03 12:00 AM Running
2/25/03 12:15 AM Running
2/25/03 12:30 AM Running
2/25/03 12:45 AM Running
2/25/03 1:00 AM Running
2/25/03 1:15 AM Running
2/25/03 1:30 AM Running
2/25/03 1:45 AM Running
2/25/03 2:00 AM Running
252
253

Fig. 20a

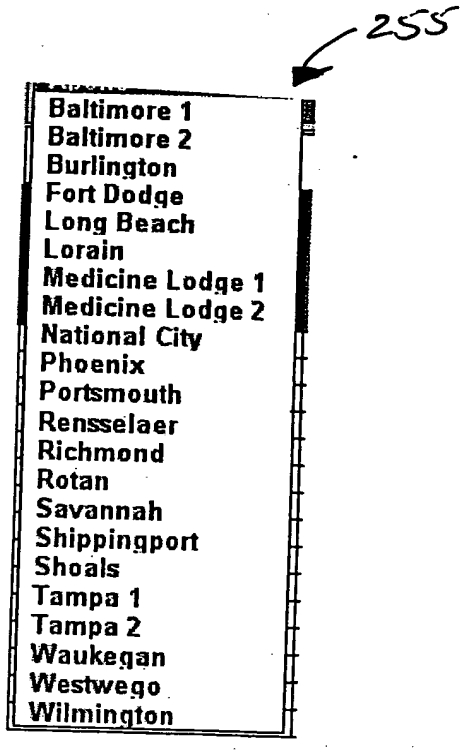

255
Baltimore 1
Baltimore 2
Burlington
Fort Dodge
Long Beach
Lorain
Medicine Lodge 1
Medicine Lodge 2
National City
Phoenix
Portsmouth
Rensselaer
Richmond
Rotan
Savannah
Shippingport
Shoals
Tampa 1
Tampa 2
Waukegan
Westwego
Wilmington

Fig. 20b

Select Period / Frequency

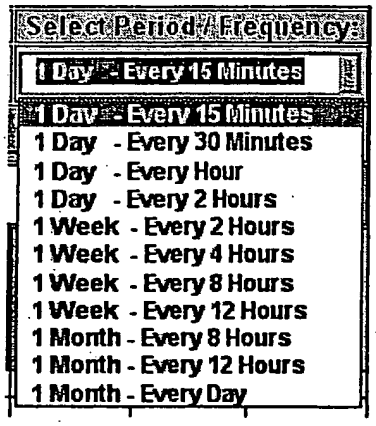


Fig. 20c

Select Server

257 →

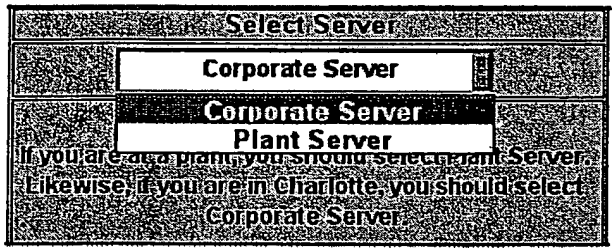


Fig. 20d

Select Measures (Tags)

258 →

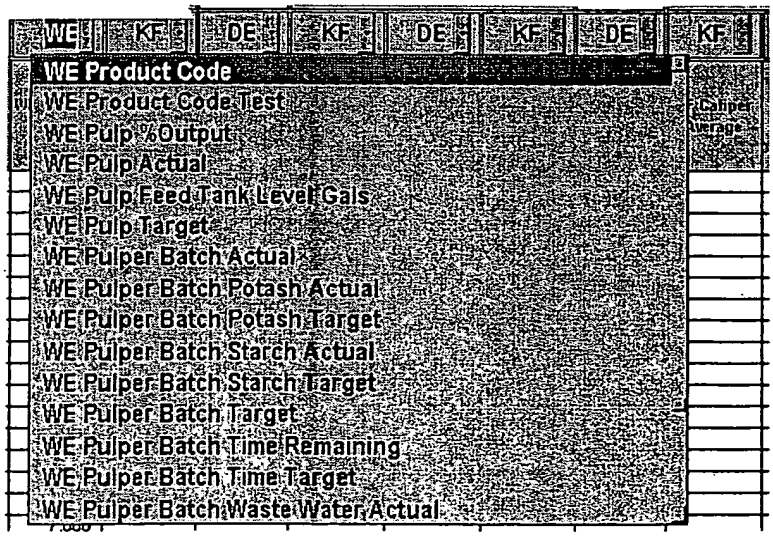


Fig. 20e

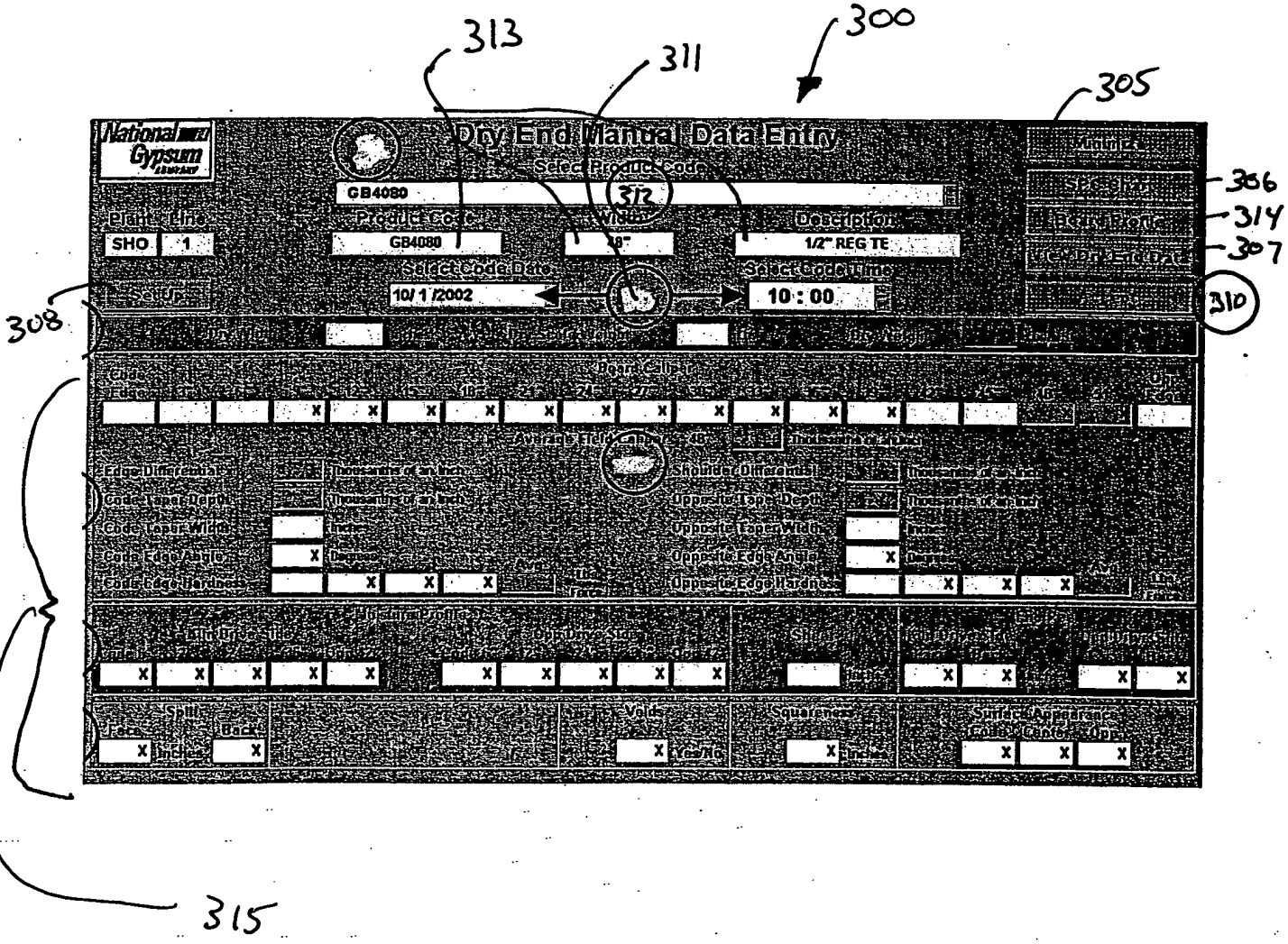

313
311
300
305
Dry End Manual Data Entry
Select Product Code
GB4080
312
Plant
Line
SHO
1
Product Code
GB4080
Width
Description
1/2" REG TE
Select Code Date
10/1/2002
Select Code Time
10:00
306
314
307
310
308
315

Fig. 21

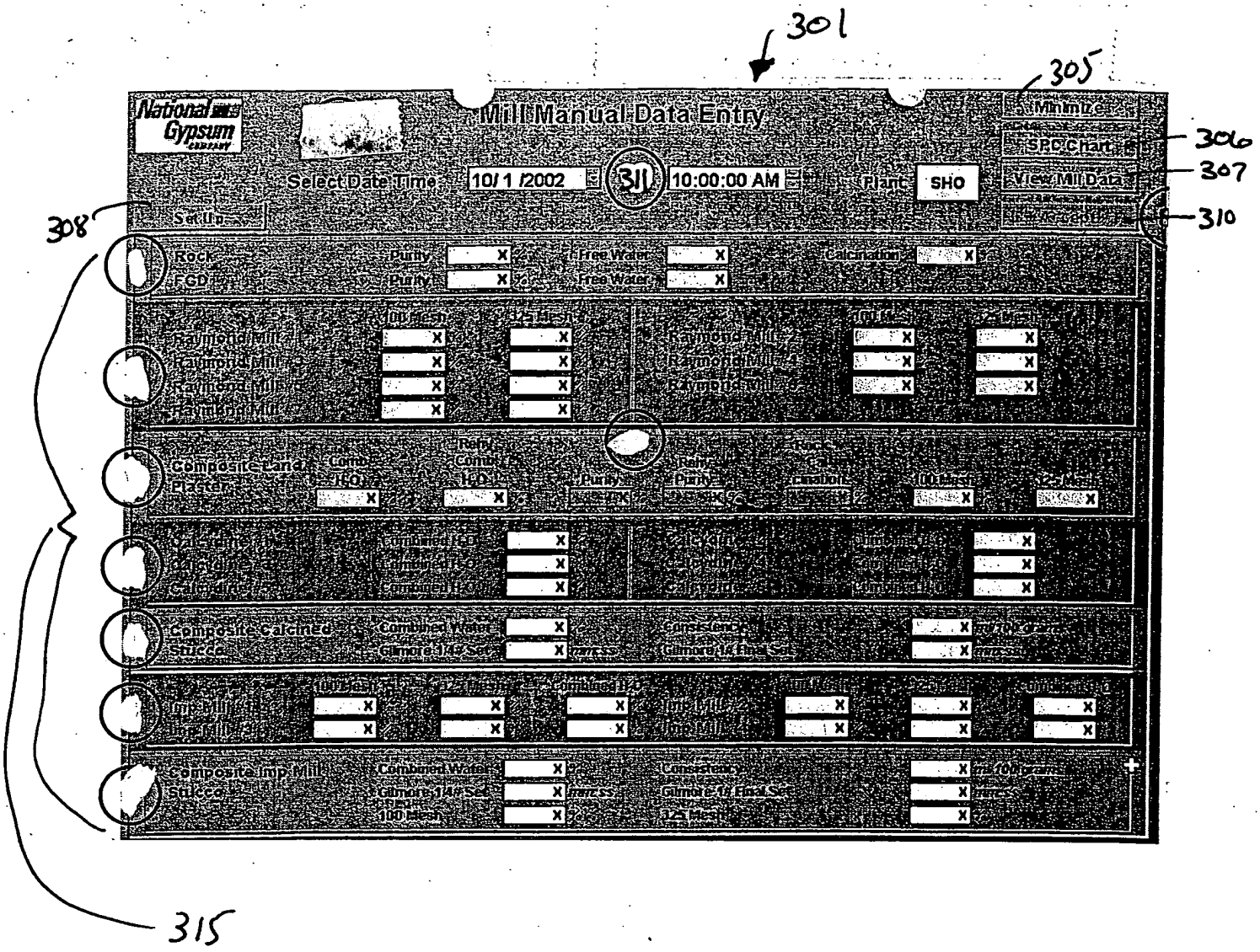

301
305
306
307
308
310
315
Mill Manual Data Entry
Minimize
SRC Chart
View Mill Data
Select Date Time
10/1 /2002
10:00:00 AM
Plant
SHO
Rock
FGD
Purity
Free Water
Calcination
Raymond Mill
Composite Land Plaster
Composite Calcined Stucco
Composite Imp Mill Stucco

Fig. 22

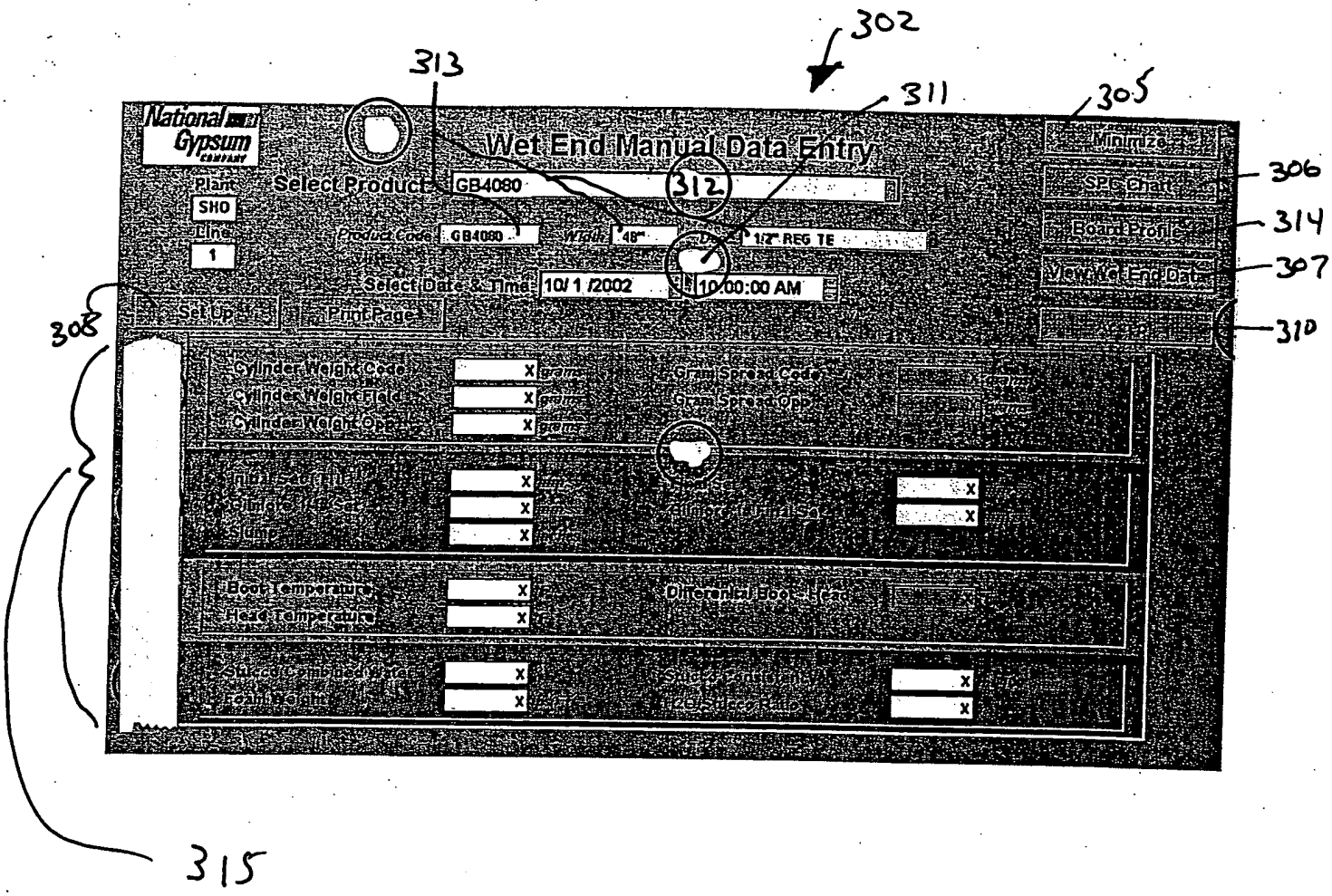

302
313
311
305
National Gypsum
Wet End Manual Data Entry
Minimize
Plant
SHO
Select Product
GB4080
312
SPC Chart
306
Line
1
Product Code
GB4080
Width
48"
1/2" REG TE
Board Profile
314
Select Date & Time
10/ 1 /2002
10:00:00 AM
View WE End Dat
307
308
Set Up
Print Page
310
Cylinder Weight Code
Cylinder Weight Field
Cylinder Weight Oper
Gram Spread Code
Gram Spread Oper
Boot Temperature
Head Temperature
Differential Boot
315

Fig. 23

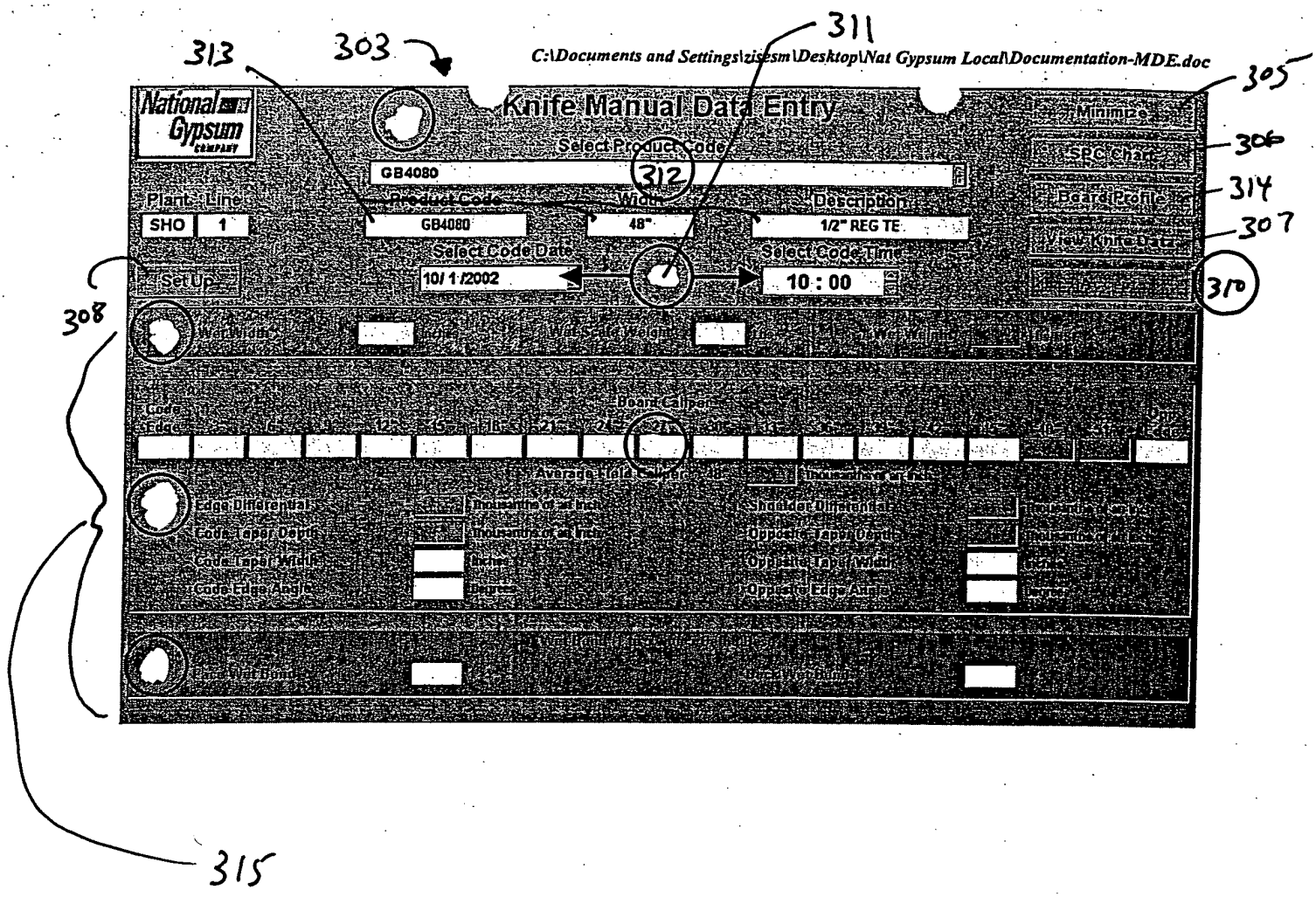


Fig. 24

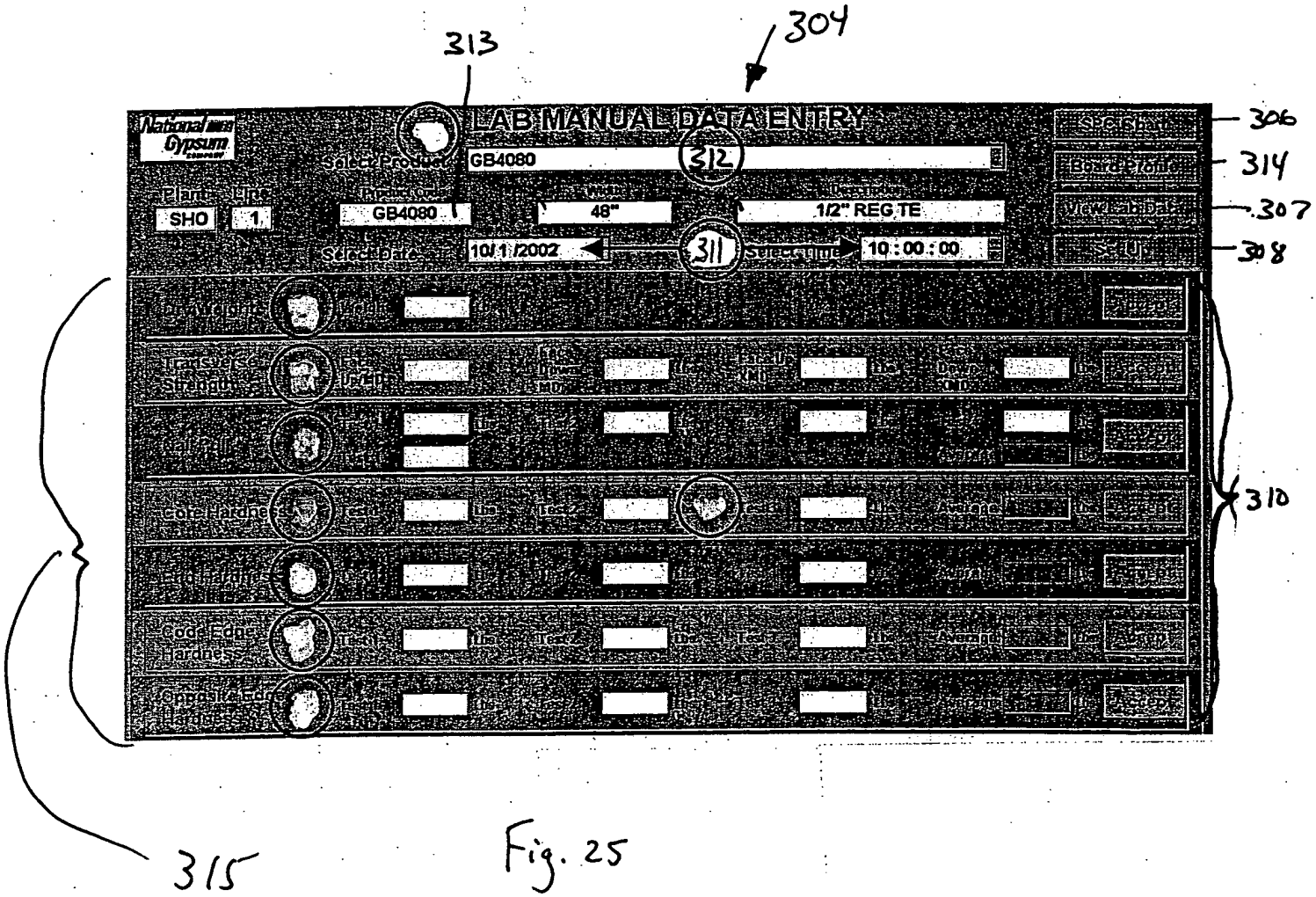

313
304
LAB MANUAL DATA ENTRY
Select Product
GB4080
312
Plant
Line
Product Code
Width
Description
SHO
1
GB4080
48"
1/2" REG TE
Select Date
10/1/2002
311
Select Time
10:00:00
306
314
307
308
310
315

Fig. 25